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ABSTRACT

The findings are presented of a study conducted for the California community colleges to describe and analyze accurate baseline data against which sex equity in vocational education programs could be measured. The components of the study are described first, including: (1) the use of Vocational Education Audit (VEA) form #48 to collect statistics from all California community colleges and secondary schools relating to 1977-78 vocational enrollments in terms of students' sex, ethnicity, program, and status--special emphasis was placed on nontraditional programs; (2) the use of VEA form #45 to collect data from the same schools relating to student completions and employment follow-up by program area; (3) the use of VEA form #47 to determine the sex and ethnicity of administrators and teachers in vocational education programs; and (4) on-site interviews with 95 randomly selected secondary school districts and 35 randomly selected community college districts to assess the reliability of the VEA forms and to collect additional information concerning support services for women and other nontraditional vocational students. Results for each of the study components are graphically and textually analyzed. Recommendations are presented for the improvement of VEA data collection and for increasing the enrollment of women and minorities in vocational programs. (Author/JP)

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OVERCOMING SEXUAL AND RACIAL IMBALANCE IN VOCATIONAL EDUCATION

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Sacramento, June, 1980

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GENERAL INTRODUCTION

In 1979, the California State Department of Education and the Chancellor's Office, California Community Colleges, contracted with Ira Nelken & Associates, Inc. to conduct a PL 94-482, Subpart 3, project, which had as its major goal the following: to describe and analyze accurate baseline data against which progress toward sex equity in vocational education can be measured.

The following objectives were designed to accomplish the project's goal.

Collect and analyze data from VEA 48's for 1977-78 for all community colleges and secondary schools in the State to determine student enrollments by sex, ethnicity, program, and student status in occupational education programs, with emphasis on non-traditional programs;

Collect and analyze data from VEA 45's for 1977-78 for all community colleges and secondary schools in the State to determine follow-up results of preparatory vocational education by programmatic area and to cross-reference data with VEA 48 student status information to the extent possible;

Collect and analyze data from VEA 47's for 1977-78 for all community colleges and secondary schools in the State, to determine employee data (by sex and ethnicity) in the administration and teaching of vocational education programs;

Develop a data collection instrument and standardized procedures for gathering the additional information called for in the scope of work, i.e., support services for women and minorities (including non-traditional students) in vocational education programs; employee practices; employing policies; additional data on progress in employment practices; as well as any other pertinent data called for by the Advisory Committee;

Conduct on-site interviews of 95 secondary school districts chosen at random from the 378 secondary school districts in California and 35 out of the total of 70 community college districts also chosen at random to audit the reliability of the VEA 47's, and 48's and gather the additional data to accomplish the above objectives;

Formulate recommendations, with the help of the Advisory Committee, for increasing the number of women and ethnic minorities in programs and employment and for improving the present data collection system.

This resulting final report, includes the following products:

- Summary report of VEA 45, 47, and 48 data with a cross reference of the VEA 45 and 48 data for the fiscal year 1977-78
- Summary results of 130 on-site and telephone interviews
- An audit of the VEA 47 and 48 data collected for the fiscal year 1977/78 (10 percent of the total number of districts with vocational education programs in the state)
- Recommendations to improve the data collection system
- Final recommendations from the VEA data, interviews/audits, and the data collection system.

STUDENT ENROLLMENT BY SEX, ETHNICITY, PROGRAM AREA, AND STUDENT STATUS (1977-78) IN VOCATIONAL EDUCATION

Form VEA 48 data for 1977-78 were collected by the California State Department of Education and the Chancellor's Office, California Community Colleges, coded and placed on tape by data processing personnel, and to some extent analyzed to meet specific federal reporting requirements and State needs. Ira Nelken & Associates, Inc. had access to all State-developed data printouts and a copy of the VEA 48 raw data tape. After unpacking the data tape, Ira Nelken & Associates personnel were able to further analyze VEA 48 tape data in formats which the project team believe elucidate the meaning of the information for vocational education program decision makers. The following discussions and analyses present the results which the contractor judged most meaningful and comprehensive.

Enrollment by Sex and Program

Table 1 on page 3 displays 1977-78 student vocational education enrollments in percent, by sex, for 27 randomly selected subprograms, nine major program areas, and overall totals for both secondary schools and community colleges. Information is presented in percent male and percent female for total category enrollment to allow an immediate determination of sex balance.

A separate column entitled BAL signifies whether the program or category was balanced (30.1-69.9 percent of one sex), moderately balanced (20.1-30.0 or 70.0-79.9 percent of one sex), or imbalanced (0-20 or 80-100 percent of one sex). The 27 selected subprograms reported were randomly selected from among all subprograms where each had a combined community college and secondary school enrollment greater than 2,000.

The data indicate that many subprogram categories whose major program area had attained a balanced classification in 1977-78 (examples, agriculture or distributive education) were not balanced. Conversely, many subprogram categories whose major program area was imbalanced (examples, health occupations or home economics—occupational preparation) were in balance.

In some cases, a major area was in balance at one educational level, but imbalanced at the other (example, office occupations which was balanced at the community college level but imbalanced at the secondary school level). Though vocational education was in balance overall at both the secondary school and community college levels, the balance broke down (did not necessarily occur) when major program areas and subprogram categories within the major program areas were examined.

The graph on page 4 displays sex equity balance for the nine major program areas. The major areas of agriculture and distributive education were in balance at both secondary school and community college levels. Office occupations was in balance at the community college level and technical education was in balance at the secondary school level. Several areas were in moderate balance at the community college level (health occupations, technical education, and trade and industry occupations). All other areas were imbalanced: health occupations (secondary school level), home economics - consumer and homemaking (at both levels), home economics - occupational preparation (at both levels), industrial arts (secondary), office occupation (secondary), and trade and industry occupations (secondary).

Table 2 on page 5 summarizes the number of subprogram categories per major program area for both educational levels combined which were balanced, moderately balanced, or imbalanced in 1977-78.

At the secondary school level, 64 of 265 subprograms were in balance (24 percent), 42 were in moderate balance (16 percent), and 159 were imbalanced (60 percent). At the community college level, 92 of 284 subprograms were in balance (32 percent), 48 were in moderate balance (17 percent), and 144 were imbalanced (51 percent).

TABLE 1
STUDENT VOCATIONAL EDUCATION ENROLLMENTS, IN PERCENT, BY SEX IN 1977-78 FOR TWENTY-SEVEN RANDOMLY SELECTED SUBPROGRAMS* AND THE NINE MAJOR PROGRAM AREAS

Subprogram	Secondary Schools			Community Colleges			Total		
	M	F	BAL+	M	F	BAL+	M	F	BAL+
Agricultural Production	64	36	B	60	40	B	63	37	B
Agricultural Mechanics	94	6	I	95	5	I	94	6	I
Agricultural Resources	71	29	MB	73	27	MB	72	28	MB
Agriculture, all subprograms	69	31	B	65	35	B	67	33	B
Apparel & Accessories	7	93	I	19	81	I	13	87	I
Food Distribution	29	71	MB	35	65	B	31	69	B
Real Estate	59	41	B	58	42	B	58	42	B
Distributive Education, all subprograms	31	69	B	54	46	B	49	51	B
Dental Assisting	4	96	I	4	96	I	4	96	I
Practical (Vocational) Nursing	4	96	I	12	88	I	12	88	I
Inhalation Therapy	34	66	B	51	49	B	50	50	B
Health Occupations Education, all subprograms	13	87	I	25	75	MB	22	78	MB
Family Relations	28	72	MB	31	69	B	29	71	MB
Foods & Nutrition	30	70	MB	17	83	I	28	72	MB
Housing & Home Furnishing	7	93	I	16	84	I	10	90	I
Home Economics - Consumer & Homemaking, all subprograms	20	80	I	19	81	I	20	80	I
Care & Guidance of Children	7	93	I	13	87	I	12	88	I
Clothing Management, Production	2	98	I	12	88	I	7	93	I
Food Management, Production	42	58	B	23	77	MB	36	64	B
Home Economics - Occupational Preparation, all subprograms	16	84	I	15	85	I	15	85	I
General Industrial Arts	87	13	I	-	-	-	87	13	I
Automotive Mechanics	93	7	I	-	-	-	93	7	I
Power Mechanics	92	8	I	-	-	-	92	8	I
Industrial Arts, all subprograms	87	13	I	-	-	-	87	13	I
Tellers	12	88	I	41	59	B	17	83	I
General Office Clerks	20	80	I	39	61	B	27	73	MB
Supervisory & Administrative	51	49	B	61	39	B	61	39	B
Office Occupations, all subprograms	20	80	I	39	61	B	28	72	MB
Civil Technology	93	7	I	90	10	I	90	10	I
Fire & Fire Safety Technology	-	-	-	96	4	I	96	4	I
Police (Law Enforcement & Correction)	58	42	B	74	26	MB	74	26	MB
Technical Education, all subprograms	59	41	B	79	21	MB	79	21	MB
Construction & Maintenance	93	7	I	94	6	I	93	7	I
Electronics Occupations	88	12	I	88	12	I	88	12	I
Upholstering	64	36	B	47	53	B	61	39	B
Trade & Industry Occupations, all subprograms	82	18	I	78	22	MB	80	20	I
TOTAL	45	55	B	52	48	B	48	52	B

* Only subprograms with a combined Community College and Secondary School enrollment greater than 2,000 were in the sample.

+ B = Balanced MB = Moderately Balanced I = Imbalanced

GRAPH 1
STUDENT ENROLLMENT BY SEX IN NINE MAJOR VOCATIONAL EDUCATION PROGRAM AREAS FOR SECONDARY SCHOOLS AND COMMUNITY COLLEGES, 1977-78

Percents are shown for females only

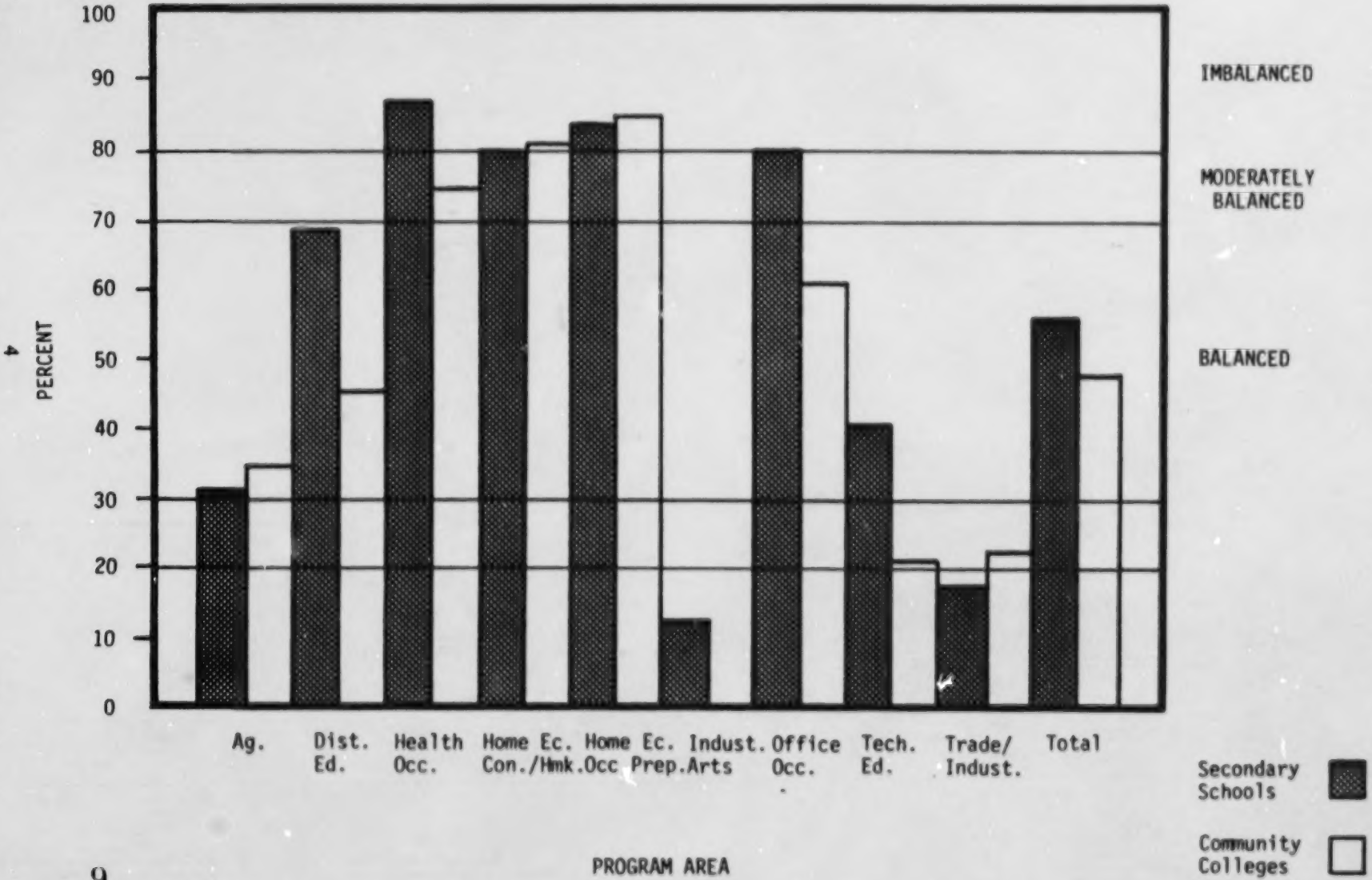


TABLE 2
SEX BALANCE IN STUDENT ENROLLMENTS FOR SUBPROGRAMS PER MAJOR PROGRAM AREA, 1977-78

(in numbers of subprograms in balance, moderate balance, or imbalance)

Program Area	Secondary Schools			Community Colleges		
	Balance	Moderate Balance	Imbalance	Balance	Moderate Balance	Imbalance
Agriculture	12	10	13	17	11	12
Distributive Education	10	3	7	15	3	3
Health Occupations Education	6	4	19	13	9	17
Home Economics - Consumer & Homemaking	1	5	4	2	3	6
Home Economics - Occupational Preparation	1	0	7	0	2	6
Industrial Arts	2	2	11	-	-	-
Office Occupations	7	10	24	20	7	16
Technical Education	3	3	3	8	4	18
Trade & Industry Occupations	22	5	71	17	9	66
TOTAL	64	42	159	92	48	144

Though sex equity balance had been attained overall in vocational education in 1977-78, considerable work still needed to be done to attain the same results by major program area and by subprogram category.

Enrollment by Ethnicity and Program

Student vocational education enrollment in 1977-78 in percent, by ethnic classification, for 27 randomly selected subprograms, in nine major program areas, and in overall totals for both secondary schools and community colleges is displayed in Table 3 on page 6. Information is presented to allow an examination of ethnic distribution per category.

No determination of "ethnic balance" has been agreed upon (compared to the 30-70 percent definition for sex balance). For possible comparative purposes, the ethnic classification distribution for the State of California for July, 1976, obtained from Population Research Unit, Sacramento, California and adjusted from U.S. Department of Health, Education, and Welfare, **Survey of Income and Education, Special Census Tape** statistics, is presented in the final row in Table 3. Caution must be advised when using this row's statistics. This aggregate total does not reflect the same regional distribution differences that various vocational education subprogram categories might reflect and may not be appropriate for comparative purposes. Furthermore, this aggregate is for the 1976 year, the latest year ethnic data was available, whereas the vocational education data is for the 1977-78 school year.

Cases of distribution which are quite similar between a major program area or subcategory and the comparative distribution and the cases of dissimilarity can be noted. This report will utilize a definition of "within approximately ten percent" from the general ethnic distribution for each ethnic classification as a measure of **pattern similarity** (PS), "within twenty percent" from the general ethnic distribution for each ethnic classification as **moderate pattern similarity** (MPS), and "more than approximately twenty percent" from the general ethnic distribution for each ethnic classification as **pattern dissimilarity** (PD). Therefore, given the July 1976 comparative data, the

TABLE 3

STUDENT VOCATIONAL EDUCATION ENROLLMENTS, IN PERCENT BY ETHNIC CLASSIFICATION IN 1977-78 FOR TWENTY-SEVEN RANDOMLY SELECTED SUBPROGRAMS* AND THE NINE MAJOR PROGRAM AREAS

Subprogram	Secondary Schools**							Community Colleges**							Total**						
	W	H	B	F	A/PI	AI/AN	PATTERN	W	H	B	F	A/PI	AI/PI	PATTERN	W	H	B	F	A/PI	AI/AN	PATTERN
Agricultural Production	84	12	2	0	1	1	PD	91	6	1	0	1	1	PD	85	11	2	0	1	1	PD
Agricultural Mechnics	83	14	1	0	1	1	PD	78	19	2	0	1	0	PD	82	15	1	0	1	1	PD
Agricultural Resources	89	6	1	1	2	1	PD	95	3	1	0	1	0	PD	92	5	1	0	1	1	PD
Agriculture, all subprograms	82	14	2	0	1	1	PD	91	6	1	0	1	1	PD	85	11	2	0	1	1	PD
Apparel & Accessories	66	22	9	1	2	1	PD	82	9	5	0	3	1	PD	74	16	7	0	2	1	PS
Food Distribution	67	21	8	1	2	1	PD	77	10	9	0	3	1	PD	70	18	8	1	2	1	PS
Real Estate	79	14	5	0	2	0	PD	90	4	3	0	2	1	PD	90	4	3	0	2	1	PD
Distributive Education, all subprograms	69	18	9	1	2	1	PS	88	5	4	0	2	1	PD	84	8	5	0	2	1	PD
Dental Assisting	77	14	7	0	2	0	PS	89	7	3	0	1	0	PD	83	10	5	0	1	0	PD
Practical (Vocational) Nursing	60	22	16	0	2	0	PD	87	6	5	0	1	1	PD	84	7	6	0	2	1	PD
Inhalation Therapy	58	8	20	1	13	0	PD	81	8	6	0	3	2	PD	80	8	7	1	3	2	PD
Health Occupations Education, all subprograms	63	20	13	1	2	1	PD	88	5	4	0	2	1	PD	81	9	7	0	2	1	PD
Family Relations	71	18	8	1	2	1	PS	77	11	7	1	4	0	PS	73	15	8	1	3	0	PS
Foods & Nutrition	63	20	13	1	2	1	PD	80	11	5	1	2	1	PD	66	19	12	1	2	1	PD
Housing & Home Furnishing	72	14	11	0	2	1	PD	88	5	3	1	2	1	PD	78	11	8	1	2	1	PD
Home Economics - Consumer & Homemaking, all subprograms	68	18	11	1	2	1	PD	82	10	4	1	2	1	PD	71	16	9	1	2	1	PS
Care & Guidance of Children	65	21	11	0	2	1	PD	85	8	6	0	1	0	PD	79	12	7	0	1	1	MPS
Clothing Management, Production	48	19	30	0	2	1	PD	87	5	5	0	2	1	PD	68	12	17	0	2	1	PD
Food Management, Production	60	18	19	0	2	1	PD	82	5	10	0	2	1	PD	67	14	16	0	2	1	PD
Home Economics - Occupational Preparation, all subprograms	63	19	15	0	2	1	PD	85	7	6	0	1	1	PD	77	12	9	0	1	1	MPS
General Industrial Arts	84	11	2	1	1	1	PD	-	-	-	-	-	-	-	84	11	2	1	1	1	PD
Automotive Mechanics	79	13	4	0	3	1	PD	-	-	-	-	-	-	-	79	13	4	0	3	1	PD
Power Mechanics	66	20	11	0	3	0	PD	-	-	-	-	-	-	-	66	20	11	0	3	0	PD
Industrial Arts, all subprograms	66	18	11	1	3	1	PD	-	-	-	-	-	-	-	66	18	11	1	3	1	PD
Tellers	66	22	8	1	3	1	PD	80	0	16	0	4	0	PD	68	19	9	1	3	1	MPS
General Office Clerks	76	16	4	1	3	1	PD	77	6	13	1	2	1	PD	76	12	8	1	3	0	PS
Supervisory & Administrative	79	10	8	1	2	0	PD	87	5	5	0	2	0	PD	87	5	5	0	2	1	PD
Office Occupations, all subprograms	68	19	8	1	3	1	MPS	83	7	7	1	2	1	PD	74	13	8	1	3	1	MPS
Civil Technology	100	0	0	0	0	0	PD	86	8	3	0	2	1	PD	86	8	3	0	2	1	PD
Fire & Fire Safety Technology	-	-	-	-	-	-	-	87	9	2	0	1	1	PD	87	9	2	0	1	1	PD
Police (Law Enforcement & Correction)	100	0	0	0	0	0	PD	80	9	9	0	1	1	PD	80	9	9	0	1	1	PD
Technical Education, all subprograms	80	13	4	2	1	0	PD	85	6	6	0	2	1	PD	85	6	6	0	2	1	PD
Construction & Maintenance	86	8	4	0	1	1	PD	95	2	1	0	2	0	PD	88	7	4	0	1	0	PD
Electronics Occupations	56	23	16	1	4	0	PD	81	6	9	0	3	1	PD	56	16	13	1	4	0	PD
Upholstering	60	29	9	0	1	0	PD	74	12	10	0	2	2	MPS	62	26	9	0	2	1	PD
Trade & Industry Occupations, all subprograms	66	21	10	1	2	1	PD	84	7	6	0	2	1	PD	75	14	8	0	2	1	MPS
Total	68	18	10	1	2	1	MPS	84	7	6	0	2	1	PD	75	13	8	1	2	1	MPS
Statewide, July 1976, comparative data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71	16	8	1	3	1	-

* Only subprograms with a combined Community College and Secondary School enrollment greater than 2,000 were in the sample.

** Total enrollment statistics developed, from which these percentage statistics are derived differ from State totals on printout EDVED SEA/VED 719, run date 02/17/79, page 4967, by approximately 3.3 percent across all ethnicities.

W = White, H = Hispanic, B = Black, F = Filipino, A/PI = Asian/Pacific Islander, AI/AN = American Indian/Alaskan Native

For ethnic pattern, PS = pattern similarity, MPS = moderate pattern similarity, PD = pattern difference

following ranges constituted pattern similarity: white, 64-78 percent; hispanic, 14-18 percent; black, 7-9 percent; Filipino, 0-2 percent; Asian/Pacific Islander, 2-4 percent; and American Indian/Alaskan Native, 0-2 percent. Moderate pattern similarity was found in this distribution range set: white, 57-63 and 79-85 percent; hispanic, 12-13 and 19-20 percent; black, 6-7 and 9-10 percent; Filipino, 2-3 percent; Asian/Pacific Islander, 1-2 and 4-5 percent; and American Indian/Alaskan Native, 2-3 percent. Other ranges were pattern dissimilarity.

The data in Table 3 on page 6 indicate that many subprogram categories within a major program area which had attained a particular ethnic pattern classification in 1977-78 had differing ethnic pattern classifications. For example, at the secondary level distributive education attained pattern similarity, yet all three subprograms listed showed pattern dissimilarity.

In some cases, a major area which had pattern similarity at one educational level had pattern dissimilarity at another (example, distributive education had pattern similarity at the secondary school level, but pattern dissimilarity at the community college level). Though vocational education showed moderate pattern similarity overall at the secondary school level and overall for the state at both levels combined, the pattern (see Graph 2 on page 8 for visual of secondary school and community college level patterns) did not occur when many major program areas and subprogram categories within the major program areas were examined.

The major area of distributive education had pattern similarity at the secondary school level. Office occupations indicated moderate pattern similarity at the secondary school level. All other (seven) major program areas at the secondary school level had pattern dissimilarity. All major program areas (eight) at the community college level showed pattern dissimilarity.

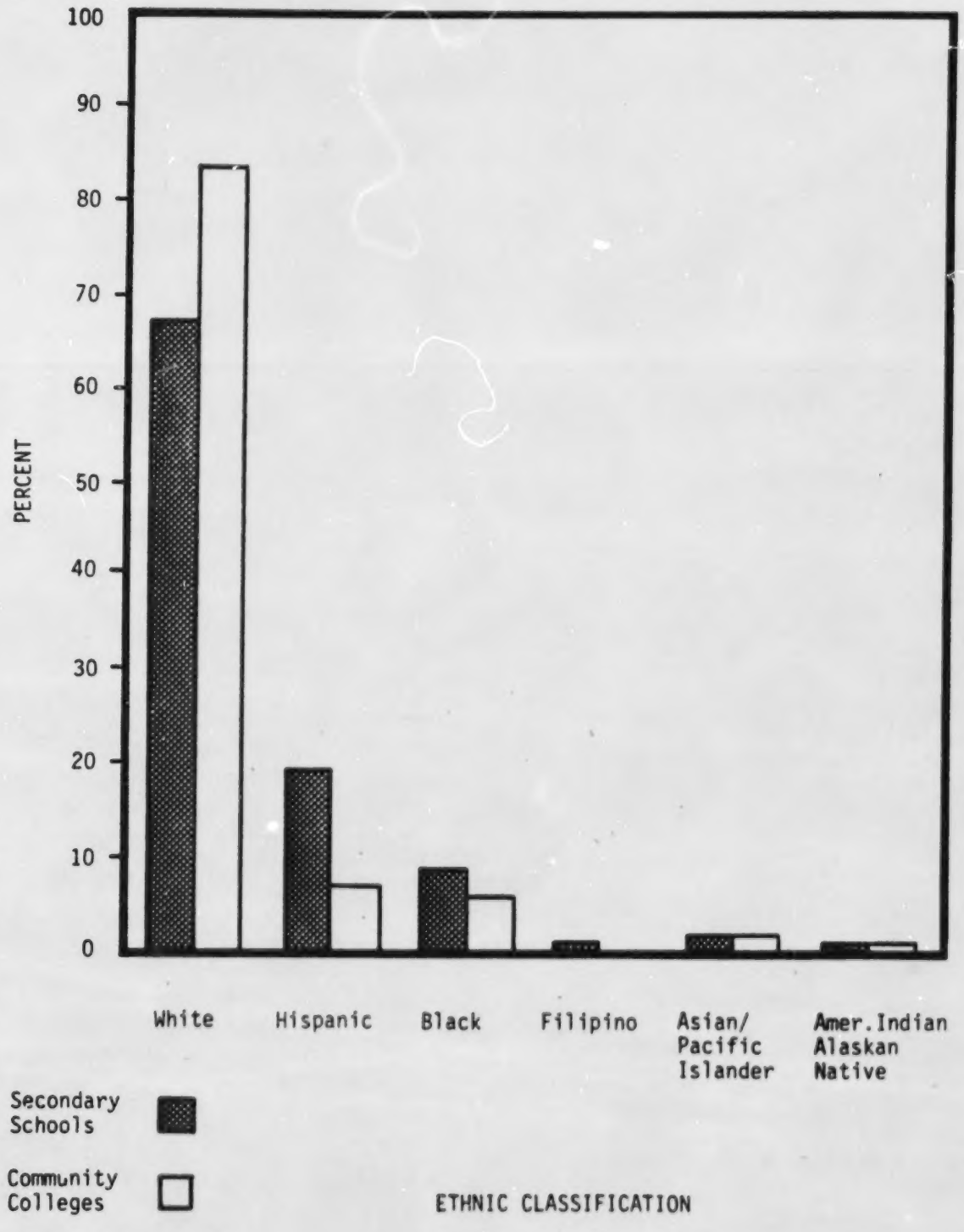
Twenty-six subprogram areas with secondary school enrollment were examined, as well as twenty-four subprogram areas with community college enrollment. Combined subprogram enrollments for both educational levels was at least 2,000 for each subprogram examined.

At the secondary school level, 2 of 26 subprograms examined had pattern similarity (8 percent), and 24 had pattern dissimilarity (92 percent). At the community college level, 1 of 24 subprograms had pattern similarity (5 percent), 1 had moderate pattern similarity (5 percent), and 22 had pattern dissimilarity (90 percent).

For the secondary level, the basic pattern discrepancies were primarily in the representation of blacks and whites. At the community college level, the most frequent pattern discrepancies involved the representation of hispanics and whites.

Though some pattern similarity and some moderate pattern similarity had been attained in vocational education in 1977-78, much needed to be done to attain pattern similarity by major program area and subprogram category within each major program.

GRAPH 2
ETHNIC CLASSIFICATION OF SECONDARY SCHOOLS AND COMMUNITY COLLEGE ENROLLMENTS IN INSTRUCTIONAL PROGRAMS, 1977-78



Termination of Enrollment (Completers and Leavers)

Student vocational education enrollments in percent, by sex, and ethnic classification for students enrolling, completing the program of choice, or leaving school without completing their program of choice in 1977-78 are presented in Table 4, page 10, for both secondary schools and community colleges. A completer is defined as a student who has completed the requirements of a planned sequence of courses/services (instructional program) and left the institution. A leaver is a student who had enrolled in and attended a program/service without completing it and who voluntarily left before completion to take a job in or related to his/her field of training.

For each statistical category—enrollment total, completers, and leavers—the percent males and percent females in each ethnic classification are presented, followed by each ethnic group's percentage of all ethnic groups in that statistical category. For example, at the community college level, hispanics comprised 7 percent of total enrollments, 6 percent of total completers, and 5 percent of total leavers. Also among hispanic completers at this level, 50 percent were male and 50 percent were female.

Of interest are percentage statistics that locate trends or indicate differences. At the secondary school level, percent male and percent female of enrollment totals indicated little difference in sex distribution among ethnic classifications. White males as a percentage of total enrollment, completers, and leavers were quite similar; black males showed smaller completer totals and smaller leaver totals. This indicates, proportionately, the same number of white males enrolled, completed, or left as white females, but fewer black males completed or left than did black females. American Indian/Alaskan Native males showed propensity to be leavers and not be completers.

At the community college level, female leaver percentages for all ethnic classifications were higher than enrollment percentages, indicating that a greater proportion of females than of males were leavers, regardless of ethnicity. Female Filipinos, Asians/Pacific Islanders, and American Indians/Alaskan Natives had greater proportions of completers than enrollments, and proportionately more females of these ethnic classifications were completers than were female whites, hispanics, or blacks.

Differences between community college patterns and secondary school patterns were also evident. Higher proportions of males versus females of all ethnicities were found in community college vocational education than in secondary school vocational education. Proportionately, males were more involved than females in vocational education at the community college level than at the secondary school level. Additional conclusions and interpretations can be drawn from Table 4.

Enrollment by Sex and Ethnicity in (1) Specialized Programs and of (2) Specialized Types of Students

Student vocational education enrollments in 1977-78 in percent, by sex and ethnic classification for (1) students who were in specialized categories (Disadvantaged, Limited English Speaking, Handicapped, and Displaced Homemaker) and (2) who were enrolled in or used specialized programs (Work Study, Placement Services, Support Services, Day Care Services, Economically Depressed) are presented in Table 5 for both secondary schools and community colleges.

For each major column category, the percent males and percent females in each ethnic classification are presented followed by that ethnic group's percentage of that particular column category. Trends and differences can be clearly noted in Table 5, page 11.

Whites at the secondary school level, and whites and blacks at the community college level, formed greater percentages of the Subpart 4 disadvantaged category than they did in the Subpart 2 and 3 categories. Filipino females at the secondary school level, and Filipino and American Indian/Alaskan Native women at the community college level, were a larger proportion of Subpart 2 and 3 disadvantaged than were other female groups. Filipino and Asian/Pacific Islander females at the secondary school level, and Filipino and American Indian/Alaskan Native females at the community college level, represented larger proportions, while black females at the community

TABLE 4
PERCENTAGE OF VOCATIONAL EDUCATION STUDENT ENROLLMENTS AND TERMINATIONS (COMPLETERS AND LEAVERS) IN 1977-78 BY SEX AND ETHNICITY FOR SECONDARY SCHOOLS AND COMMUNITY COLLEGES

Ethnicity	Secondary Schools									Community Colleges								
	Total Enrollment			Completers			Leavers			Total Enrollment			Completers			Leavers		
	% of Total		Ethnic Total	% of Total		Ethnic Total	% of Total		Ethnic Total	% of Total		Ethnic Total	% of Total		Ethnic Total	% of Total		Ethnic Total
	M	F		M	F		M	F		M	F		M	F		M	F	
White	45	55	68	43	57	70	45	55	72	52	48	84	53	47	87	47	53	86
Hispanic	44	56	19	41	59	18	42	58	18	51	49	7	50	50	6	48	52	5
Black	46	54	9	42	58	8	38	62	6	53	47	6	52	48	5	43	57	5
Filipino	42	58	1	39	61	1	41	59	1	54	46	0	43	57	0	45	55	1
Asian/ Pacific Isl.	45	55	2	41	59	2	43	57	2	57	43	2	52	48	2	49	51	2
American Indian/ Alaskan Natives	44	56	1	39	61	1	49	51	1	60	40	1	49	51	0	45	55	1
TOTAL	45	55	100	43	57	100	44	56	100	52	48	100	52	48	100	46	54	100

TABLE 5
PERCENTAGE OF STUDENTS IN VOCATIONAL EDUCATION SPECIALIZED PROGRAMS IN 1977-78 BY SEX AND ETHNICITY FOR SECONDARY SCHOOLS AND COMMUNITY COLLEGES

Level	Ethnicity*	Disadvantaged SP 2, 3			Disadvantaged SP 4			Limited English Speaking			Handicapped			Displaced Homemaker			Work Study			Placement Services			Support Services			Day Care Services			Econom. Depressed			TOTAL		
		% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total
		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F	
Secondary Schools	W	51	49	54	51	49	61	50	50	9	59	41	68	0	100	78	38	62	40	43	57	71	0	100	62	4	96	53	23	77	52	40	60	52
	H	47	53	27	48	52	22	46	54	58	58	42	18	0	100	9	32	68	31	41	59	17	0	100	22	3	97	14	20	80	30	36	64	29
	B	45	55	15	49	51	15	50	50	2	61	39	10	0	100	7	42	58	20	53	47	8	0	100	13	6	94	33	29	71	13	40	60	13
	F	42	58	1	43	57	1	50	50	8	49	51	1	0	100	3	25	75	2	50	50	2	0	100	2	0	0	0	23	77	1	41	59	1
	A/PI	48	52	2	42	58	2	49	51	23	51	49	2	33	67	2	24	76	6	25	75	2	0	100	1	50	50	0	18	82	3	38	62	4
	AI/AN	47	53	1	48	52	1	50	50	0	54	46	1	0	100	1	38	63	1	0	0	0	0	0	0	0	0	0	23	77	1	38	62	1
	TOTAL	49	51	100	50	50	100	48	52	100	59	41	100	1	99	100	36	64	100	43	57	100	0	100	100	5	95	100	23	77	100	39	61	100
Community Colleges	W	50	50	70	51	49	59	50	50	65	58	42	70	3	97	71	55	45	63	55	45	80	0	100	83	27	73	69	30	70	75	44	56	72
	H	51	49	12	47	53	14	50	50	25	60	40	11	1	99	10	57	43	18	57	43	10	1	99	9	18	82	17	21	79	12	44	56	13
	B	51	49	13	65	35	20	44	56	1	57	43	15	2	98	12	51	49	13	60	40	7	0	100	5	16	84	10	52	48	9	53	47	10
	F	46	54	1	42	58	2	55	45	1	59	41	1	0	100	1	54	46	2	52	48	1	0	100	1	33	67	1	29	71	1	41	59	1
	A/PI	49	51	3	53	47	4	47	53	7	53	47	2	0	100	5	72	28	3	62	38	2	0	100	2	17	83	2	42	58	2	48	52	3
	AI/AN	45	55	1	44	56	1	46	54	1	56	44	1	0	100	1	50	50	1	56	44	0	0	100	0	33	67	1	23	77	1	41	59	1
	TOTAL	50	50	100	53	47	100	50	50	100	58	42	100	3	97	100	55	45	100	56	44	100	0	100	100	24	76	100	31	69	100	45	55	100

* W = White
H = Hispanic
B = Black
F = Filipino
A/PI = Asian/Pacific Islander
AI/AN = American Indian/Alaskan Natives

college level, formed a smaller proportion of the Subpart 4 disadvantaged category than did other female groups.

At the secondary school level, hispanics comprised the largest proportion of limited-English-speaking students. Asians/Pacific Islanders also comprised a substantial proportion of this category. At the community college level, whites were the largest limited-English-speaking (LES) grouping, and the proportion of hispanics considerably decreased. Presumably, hispanics enrolled in community colleges speak English, and the whites who were counted as LES were foreign students who had not yet mastered English.

Within the handicapped student category, a greater proportion of students were black and a lesser proportion were hispanic at the community college than at the secondary school level. For the three largest ethnic classifications (white, hispanic, black) greater proportions of males to females were enrolled in handicapped than in other specialized programs.

Except for Asian/Pacific Islanders, displaced homemakers were almost always female in 1977-78.

A comparison of specialized student classifications and services (Table 5, page 11) to general ethnic and sex enrollments (found in total enrollment columns of Table 4, page 10) indicates that students classified as black and hispanic were proportionately larger percentages of the disadvantaged, LES, work study, and day care categories than they were of total enrollment at both the secondary school and community college levels. Placement services and support service proportions by ethnic classification remained relatively equivalent to the total enrollment distributions. Whites were a greater proportion of the displaced homemaker category than they were in total enrollment at the secondary school level and a lesser proportion at the community college level. Hispanics, blacks and Asians/Pacific Islanders formed a greater proportion of the displaced homemaker category than of the total enrollment category at the community college level.

Females used proportionately more work study, economically depressed area programs, and day care services than did males at the secondary school level. They used proportionately less work study and placement services than did males at the community college level. At the community college level, economically-depressed-area-program services served black males slightly more than black females. Additional conclusions and interpretation can be drawn from Table 5.

Conclusions

Several generalizations may be drawn from the analysis of form VEA 48 enrollment data by sex and ethnic classification per program area, subprogram category, specialized student population data, and specialized program services.

1. Sex equity, while it had been reached in the most general, modest sense in 1977-78, was not yet occurring in many major program areas and subprogram categories.
2. Ethnic classification, pattern similarity, and moderate pattern similarity, while they had been reached in several major program areas at the secondary school level and in a small percentage of subprograms examined at each educational level in 1977-78, were not yet occurring in most major program areas or subprogram categories.
3. Analysis of specialized enrollment categories and specialized services revealed that varied demographics occurred at the secondary and the community college levels, implying that each level needed to deal with its problems and take its bows independently. This variation further indicated that there was knowledge and experience to communicate among levels.
4. The demographic variations further reflected differing needs, expectations, positions in society, societal responses, and problems/strengths among ethnic groups and between the two sexes. Vocational education needed to respond to those differences, aiding and supporting each individual to reach his/her maximal development. It seems clear that differing responses, services, and emphases may be required for each group/classification.

STUDENT FOLLOW-UP RESULTS IN PREPARATORY VOCATIONAL EDUCATION (1977-78)

The collection of VEA 45 data for 1977-78 was accomplished in the same way as for VEA 48 data described in the previous section. The following discussions and analyses present what the contractor considers to be the most meaningful and comprehensive findings relative to VEA 45 data.

Placement of Program Completions (Terminations) by Program and School Level

Table 6 on page 14 displays student vocational education follow-up data from 1977-78 in percent, for the nine major program areas, and for three special programs/services for both the secondary school and community college levels. Information is presented in percent of completions within a particular placement status to allow an immediate determination of final distribution of completions. Completions, as defined on the VEA 45 form, were equivalent to terminations (completers and leavers) on the VEA 48 form.

Generally, one-quarter to one-half of the students in each program area or special program/service were categorized in the column labeled status unknown (i.e., no follow-up information was available on these students). At both the secondary school and community college levels, 31 percent of all student completions could not be followed up (i.e., status unknown was listed). Status unknown percentages varied greatly among major program areas and special programs/services: the high was 58 percent for LES students at the community college level; the low was 18 percent for technical education students at the secondary school level. Special programs/services had the highest percentages of status unknown at both the secondary school and community college levels.

Students not available for placement ranged from a high of 49 percent in technical education at the secondary school level to a low of 7 percent in health occupations education and trade and industry occupations at the community college level. The secondary school average for "not available for placement" was 28 percent, the community college average was 9 percent. At the secondary schools, more than three-quarters of the students not available for placement were continuing education at a higher level. At the community college level, a little less than half not available for placement were continuing education at a higher level. At each educational level, the variation among major program areas and special programs/services in percent students "not available for placement" and percent "continuing education at higher level" was considerable.

Among students available for placement, for each educational level, the majority of students were employed full time, either within the field for which they were trained or in a related field (23 percent divided by 41 percent, or 56 percent at the secondary school level; 44 percent divided by 60 percent, or 73 percent at the community college level). Thirty-two percent of those available for placement had other employment (including part-time employment) at the secondary level, and 20 percent had other employment at the community college level. Only 12 percent and 17 percent—at the secondary school and community college levels, respectively—were unemployed and seeking work. Major program areas and special programs/services varied widely in percent full-time trained or related employment, other employment, and unemployed and seeking work. The lowest unemployment level was found in health occupations education at the community college level. Several areas tied for highest in unemployment at 7 percent: home economics, occupational preparation (secondary school and community college levels), and trade and industry occupations (community colleges). Highest employment in trained or related field areas were health occupations and trade and industry occupations at the community college level. Students trained in home economics (at both educational levels) and distributive education at the community college level were otherwise employed most often.

TABLE 6
PLACEMENT OF PROGRAM COMPLETIONS IN PERCENTAGES FOR NINE MAJOR PROGRAM AREAS AND FOR THREE SPECIAL PROGRAMS/SERVICES, 1977-78

Level	Program Area	Available For Placement			Not Available For Placement		Status Unknown	Total Program Completions
		Employed Full-Time Trained or Related Field	Other Employment	Unemployed & seeking work	Continuing Education at Higher Level	Other Reasons		
Secondary Schools	Agriculture	16	15	6	30	8	25	100
	Distributive Education	20	14	6	20	5	35	100
	Health Occupations Education	31	13	6	21	4	25	100
	Home Economics - Consumer & Homemaking	No Data Collected by State						
	Home Economics - Occupational Preparation	15	18	7	25	7	28	100
	Industrial Arts	No Data Collected by State						
	Office Occupations	20	11	5	25	6	33	100
	Technical Education	21	9	3	39	10	18	100
	Trade & Industry Occupations	27	15	5	18	5	30	100
	Handicapped	9	8	6	18	7	52	100
	Disadvantaged	11	10	6	17	5	51	100
	Limited English Speaking	12	11	5	16	7	49	100
	State Totals	23	13	5	23	5	31	100
Community Colleges	Agriculture	30	11	5	8	6	40	100
	Distributive Education	35	17	4	4	6	35	100
	Health Occupations Education	60	7	1	4	3	25	100
	Home Economics - Consumer & Homemaking	No Data Collected by State						
	Home Economics - Occupational Preparation	31	17	7	9	6	30	100
	Industrial Arts	-	-	-	-	-	-	
	Office Occupations	44	13	3	4	4	32	100
	Technical Education	26	9	3	7	10	45	100
	Trade & Industry Occupations	50	10	7	2	5	26	100
	Handicapped	23	13	5	6	10	43	100
	Disadvantaged	27	12	5	10	6	40	100
	Limited English Speaking	14	6	6	7	9	58	100
	State Totals	44	12	4	4	5	31	100

Comparison of Termination Data (Completers and Leavers) on VEA 48 and VEA 45 Forms

The only data collected on both VEA 45 and VEA 48 forms in 1977-78 were information on student terminations (called student completions on the VEA 45). Termination on the VEA 48 form was the sum of completers (column J) and leavers (column K). Completion on the VEA 45 form was column (2) and was defined as completing a program (completers) or leaving before completing with marketable skills (leavers).

It was possible to cross-reference data on the VEA 45 form with VEA 48 student status information by a comparison between the sum of columns (J) and (K) of the VEA 48 form and column (2) of the VEA 45. The two statistics should have been equal.

Table 7 on page 16 displays the comparison. In all cases there was a considerable difference between VEA 48 and VEA 45 data. At a minimum, a difference between the data on the two forms was found to be 4.3 percent (health occupations at the community college level). The maximum percent difference found was -52.6 percent in trade and industry at the community college level. The mean percent difference was 19.3 percent for all program areas at the secondary school level (range 7.8 percent to 35.3 percent) and -33.1 percent at the community college level (range 4.3 percent to -52.6 percent). Very large variations in percent differences in data reported on the two forms were found among major program areas. The data on the two forms showed considerable difference, one to the other.

Conclusions

Several conclusions can be drawn from an examination and analysis of the form VEA 45 data by major program areas.

1. Program completions (terminations) follow-up data revealed that large percentages of students (when status was known) were placed and employed (60 percent at the secondary school level and 81 percent at the community college level) and that most of these were employed full-time in their trained field or in a related field of work (64 percent at the secondary school level and 79 percent at the community college level). An average of more than one out of every three students could not be followed up (status was unknown). Rates of known placement success, confirmation of education, and status unknown varied widely among the nine major program areas at both educational levels.
2. Termination data which could be cross-referenced between the VEA 48 and the VEA 45 forms indicated considerable difference in data collected from the one form to the other. The mean percent difference was 19.3 percent at the secondary school level and -33.1 percent at the community college level.

TABLE 7
COMPARISON OF TERMINATION DATA (COMPLETERS AND LEAVERS) ON VEA 48 AND VEA 45 FORMS (1977-78)

	Program Area	VEA 48* Terminations	VEA 45** Terminations	Difference	Percent Difference
Secondary Schools	Agriculture	26390	17067	9323	35.3
	Distributive Education	25705	21039	4666	18.2
	Health	15797	14570	1227	7.8
	Home Economics - Con. & Home.	***	***	---	---
	Home Economics - Occ. Prep.	11769	9236	2533	21.5
	Industrial Arts	***	***	---	---
	Office Occupations	151074	122909	28165	18.6
	Technical Education	423	568	-145	-34.3
	Trade & Industry Occupations	101784	83383	18401	18.1
	Total	332942	268772	64170	19.3
Community Colleges	Agriculture	9341	8720	621	6.6
	Distributive Education	36979	46060	-9081	-24.6
	Health	27438	26260	1178	4.3
	Home Economics - Con. & Home.	***	***	---	---
	Home Economics - Occ. Prep.	12462	11508	954	7.7
	Industrial Arts	---	---	---	---
	Office Occupations	82089	123928	-41839	-51.0
	Technical Education	28510	29924	-1414	-5.0
	Trade & Industry Occupations	79772	121752	-41980	-52.6
	Total	276591	368152	-91561	-33.1

*Sum of columns (J) and (K) of the VEA 48 Form
**Column (2) of the VEA 45 Form
***Data not collected by the State at community college level. Therefore, secondary data not included

TEACHING PERSONNEL AND PERSONNEL IN SPECIAL PROGRAMS/SERVICES BY SEX, ETHNICITY, AND PROGRAM AREA (1977-78) IN VOCATIONAL EDUCATION

Form VEA 47 data for 1977-78 was collected by the California State Department of Education and the Chancellor's Office, California Community Colleges, coded and placed on tape by data processing personnel in similar fashion to VEA 45 and 48 data discussed earlier. Likewise, Ira Nelken & Associates, Inc., had access to all State developed data printouts. The analysis of VEA 47 data presented below reflects the project team's effort to elucidate the meaning of the information for vocational education program decision-makers in the most meaningful and pertinent way possible.

Teaching Personnel by Sex, Ethnicity, and Program Area

Table 8 on page 18 displays teaching personnel employed in 1977-78 in percent, by sex, by ethnicity, and by program area for both secondary schools and community colleges.

For each program area, the percent males and percent females in each ethnic classification are presented, followed by that ethnic group's percentage of all ethnic classifications employed in that program area. For example, at the secondary school level, one percent of all teaching personnel involved in agriculture were black, and 86 percent of black teaching personnel in agriculture were male.

Statistics that locate trends or indicate differences are of most interest. Accordingly, at the secondary school level, males in each ethnic classification comprised the overwhelming majority of teaching personnel in agriculture, industrial arts, and technical education. Males formed the overwhelming minority in all ethnic classifications in health occupations and both areas of home economics. Distribution of males was very different (and sometimes inverse) for different ethnic classifications in distributive education, office occupations, and trade and industrial education. At the community college level, males in each ethnic classification comprised the overwhelming majority of teaching personnel in agriculture, distributive education, and trade and industrial education. Males in each ethnic classification comprised the overwhelming minority of teaching personnel in both areas of home economics and to a lesser extent in health occupations, in office occupations, and technical education.

In the program area of technical education at the secondary level, there were few if any teaching personnel representing certain ethnic groups. Graphs 3 and 4 on pages 19 and 21 indicate teaching personnel (by sex in the nine major program areas and ethnic classification of teaching personnel in vocational education programs respectively) in 1977-78, at both secondary school and community college levels.

Using the same 30-70 percent sex balance classification for staff employment as for student enrollment, sex equity and sex balance prevailed in distributive education for the secondary school level, office occupations for both levels, and all nine areas combined for both levels. A moderate sex balance was attained in health occupations at the community college level. Sex imbalance in teaching personnel at both levels was apparent in agriculture, both home economics areas, technical education, and trade and industrial education. It was apparent at one level in distributive education (community colleges) and health occupations and industrial arts (secondary schools). A considerable lack of sex balance in teaching personnel employed in 1977-78 was apparent.

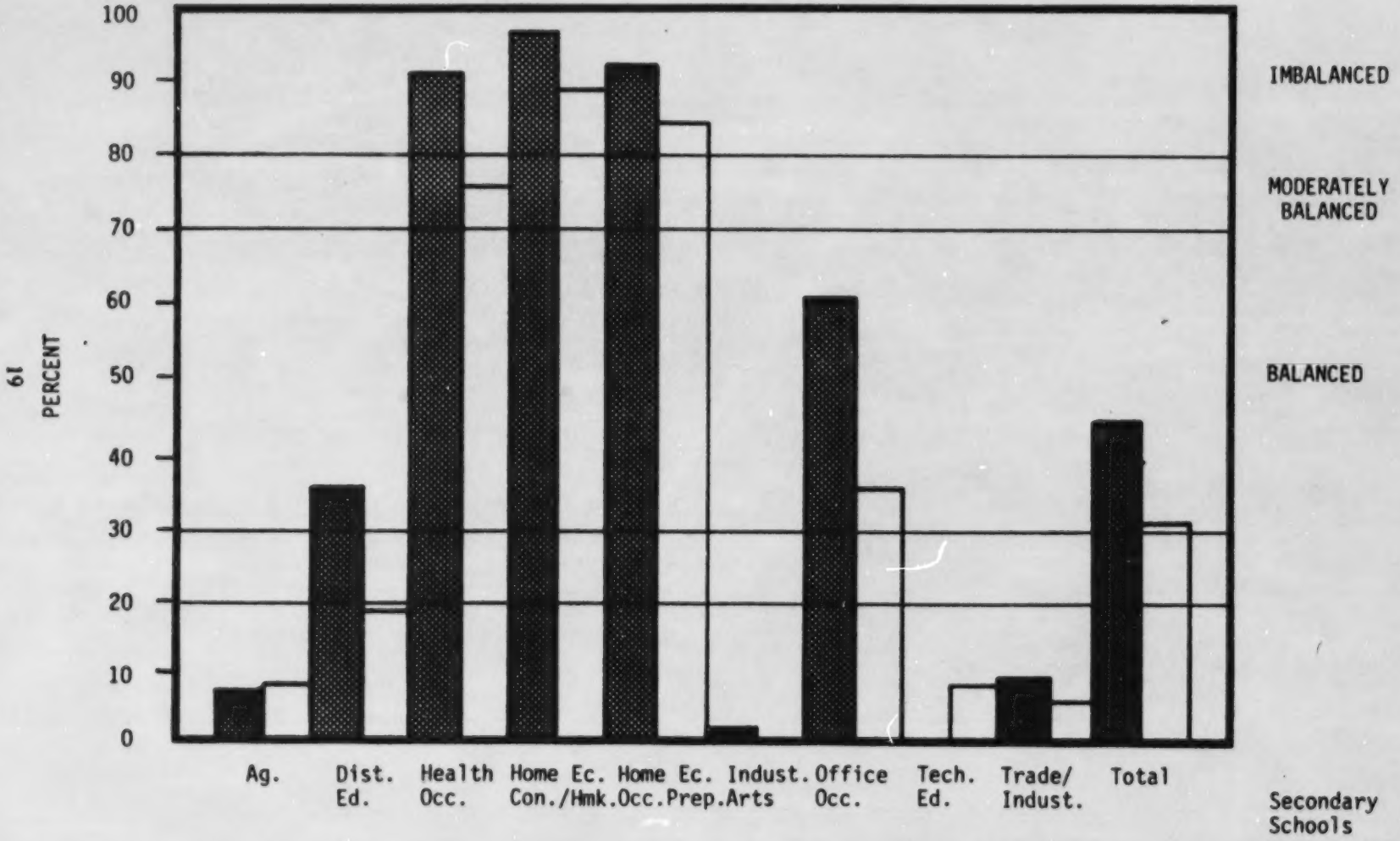
TABLE 8
VOCATIONAL EDUCATION TEACHING PERSONNEL IN NINE MAJOR PROGRAM AREAS IN 1977-78 BY SEX AND ETHNICITY PERCENTAGES FOR SECONDARY SCHOOLS AND COMMUNITY COLLEGES

Level	Ethnicity*	Agriculture			Distributive Education			Health Occupations			Home Economics: Consumer and Homemaking			Home Economics: Occupational Preparation			Industrial Arts			Office Occupations			Technical Education			Trade and Industrial Education			TOTAL		
		% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total
		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F	
Secondary Schools	W	93	7	93	67	33	89	8	92	88	3	97	86	8	92	86	99	1	88	41	59	86	100	0	90	92	8	87	56	44	87
	H	94	6	3	68	32	5	10	90	3	0	100	3	7	93	5	100	0	4	42	58	4	100	0	5	90	10	6	62	38	4
	B	86	14	1	28	72	5	18	82	8	6	94	6	13	87	5	98	2	4	10	90	7	0	0	0	83	17	6	36	64	6
	F	100	0	1	0	100	0	0	100	0	0	100	1	0	100	0	100	0	0	56	44	0	0	0	0	25	75	0	43	57	0
	A/PI	90	10	1	50	50	1	17	83	1	2	98	4	13	87	3	98	2	3	34	66	3	0	0	0	94	6	1	43	57	3
	AI/AN	83	17	1	67	33	0	0	100	0	0	100	0	0	100	1	80	20	1	40	60	0	100	0	5	94	6	0	60	40	0
	TOTAL	93	7	100	64	36	100	9	91	100	3	97	100	8	92	100	99	1	100	39	61	100	100	0	100	91	9	100	55	45	100
Community Colleges	W	92	8	96	81	19	95	24	76	90	11	89	93	16	84	92	-	-	-	65	35	92	92	8	91	94	6	92	70	30	93
	H	100	0	2	74	26	2	26	74	3	14	86	3	26	74	4	-	-	-	53	47	3	95	5	3	92	8	4	68	32	3
	B	100	0	1	83	17	2	17	83	4	3	97	2	21	79	3	-	-	-	44	56	4	87	13	3	83	17	3	56	44	3
	F	100	0	0	100	0	0	7	93	1	0	100	0	0	100	0	-	-	-	57	43	0	100	0	0	100	0	0	42	58	0
	A/PI	86	14	1	68	32	1	28	72	2	18	82	2	20	80	1	-	-	-	61	39	1	90	10	2	92	8	1	62	38	1
	AI/AN	100	0	0	100	0	0	44	56	0	0	100	0	0	100	0	-	-	-	88	12	0	24	76	1	100	0	0	69	31	0
	TOTAL	92	8	100	81	19	100	24	76	100	11	89	100	16	84	100	-	-	-	64	36	100	92	8	100	94	6	100	69	31	100

* W = White
H = Hispanic
B = Black
F = Filipino
A/PI = Asian/Pacific Islander
AI/AN = American Indian/Alaskan Natives

GRAPH 3
TEACHING PERSONNEL BY SEX IN NINE MAJOR VOCATIONAL EDUCATION PROGRAM AREAS FOR SECONDARY SCHOOLS AND COMMUNITY COLLEGES, 1977-78

Percents are shown for females only



Ethnic classification of teaching personnel in secondary school and community college vocational education programs in 1977-78 could be compared to the ethnic distribution of the population in California in July, 1976, specified previously on page 7 of this report.

The comparison indicates considerable disparity between ethnic classification percentages of teaching personnel at either educational level (secondary school or community college) and the State ethnic classification percentages, especially for whites and hispanics. Whites comprised 87 percent of secondary school teaching personnel (1977-78), 93 percent of community college teaching personnel (1977-78), and 71 percent of the State's population (July, 1976). Hispanics comprised 4 percent and 3 percent of teaching personnel at the two levels and 16 percent of the State's population. Blacks were 6 and 8 percent of teaching personnel and 8 percent of the State's population. Filipinos and American Indians/Alaskan Natives, while comprising 1 percent of the State's population, each had less than 1 percent representation in teaching personnel. Asians/Pacific Islanders had a representation of 3 percent in secondary schools and 1 percent in community colleges, in contrast to 3 percent in the general State population. Both educational levels indicate pattern dissimilarity with respect to ethnic classification distribution of teaching personnel.

Graph 4 on page 21 indicates that, in 1977-78, hispanic, black and Asian/Pacific Islander ethnicities had greater teaching personnel representation at the secondary school level than at the community college level.

Graph 5 on page 22 compares student enrollment totals by sex and teaching personnel employed by sex in the nine major program areas in 1977-78 for both secondary schools and community colleges. Student enrollment was in balance in three areas and overall at the secondary level, and in three areas and overall at the community college level. Teaching personnel employed was in balance in two areas and overall at the secondary school level, and one area and overall at the community college level. Student enrollment was in moderate balance in three areas at the community college level; teaching personnel was in moderate balance in one area at the community college level. Student enrollment was imbalanced in six areas at the secondary level and two areas at the community college level. Teaching personnel was imbalanced in seven areas at the secondary level and six areas at the community college level.

Greater sex equity was apparent in student enrollments than in teaching personnel employment in program areas to date (1977-78).

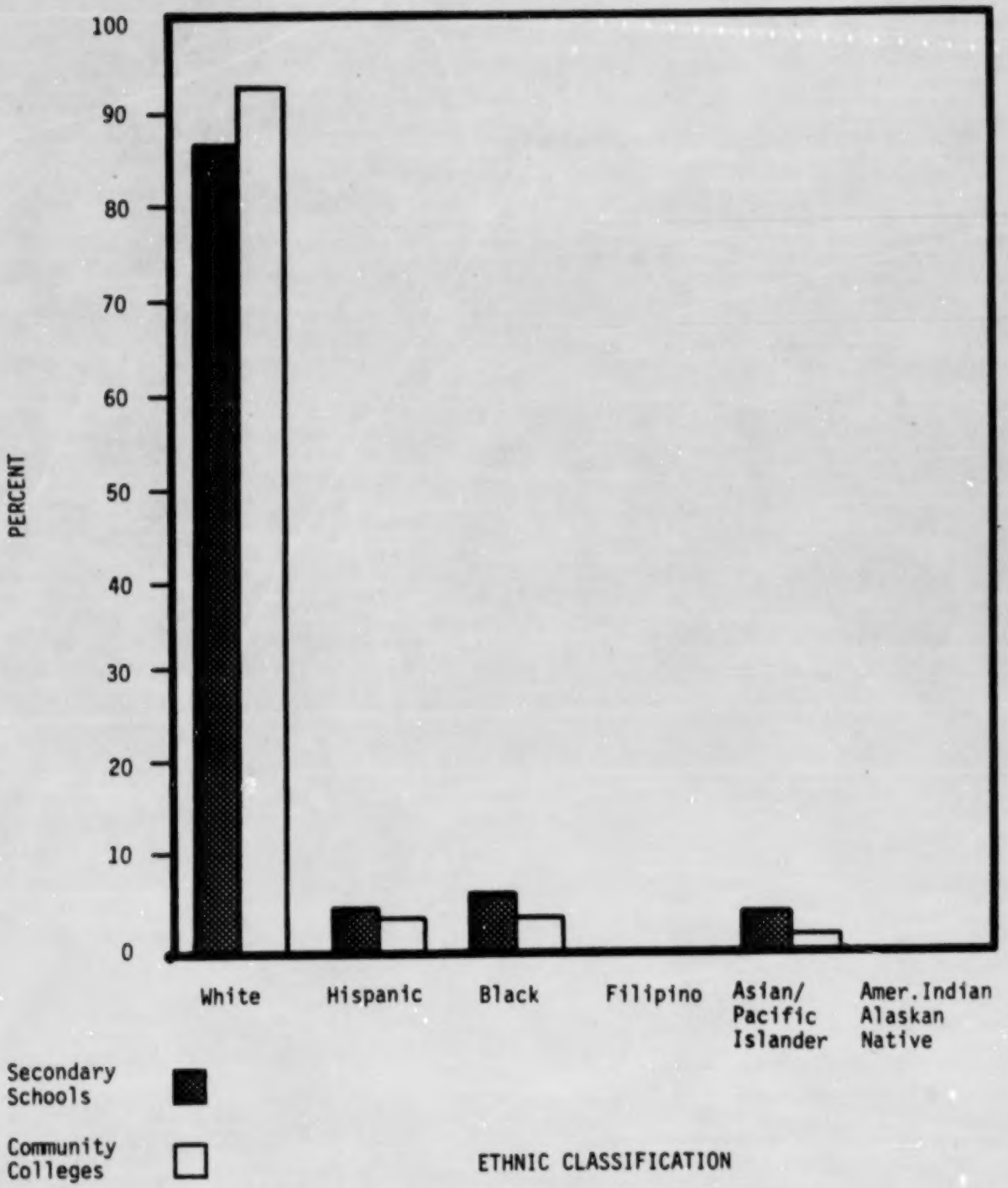
Personnel in Special Programs/Services by Sex and Ethnicity

The following tables and graphs related to personnel in Special programs/services are similar in format to those used in the previous section of this report. Table 9, page 23 is read in a similar manner to previous tables, percentage statistics having meanings previously described in this report.

At both secondary school and community college levels, ethnic distributions for classifications of personnel (directors, Guidance Counselors, etc.) differed widely. At the secondary school level, 10 percent of guidance counselors were black, but only 3 percent of subject area supervisors, were black; 11 percent of other vocational personnel were hispanic, but only 4 percent were directors or coordinators. At both secondary school and community college levels, there was a larger percentage of whites in top administrative personnel classifications than in guidance and other personnel classifications. At both levels, proportionately fewer women were directors/coordinators than counselors, subject area supervisors, or other personnel. A higher proportion of black (at both levels) and hispanic (community college level) directors/coordinators were men than was true for white directors/coordinators.

Among black guidance counselors, females were perhaps over-represented at the secondary school level. In all other ethnic groups, guidance counselors were primarily men. This same fact (black female over-representation) was also evident among subject area supervisors at the secondary level. The category "Other Vocational Personnel" showed the most consistent case of sex equity and widespread ethnic distribution at both educational levels.

GRAPH 4
ETHNIC CLASSIFICATION OF TEACHING PERSONNEL IN SECONDARY SCHOOLS AND COMMUNITY COLLEGES VOCATIONAL EDUCATION PROGRAMS, 1977-78



GRAPH 5
COMPARISON OF STUDENT ENROLLMENT AND TEACHING PERSONNEL BY SEX IN NINE MAJOR VOCATIONAL EDUCATION PROGRAM AREAS, 1977-78

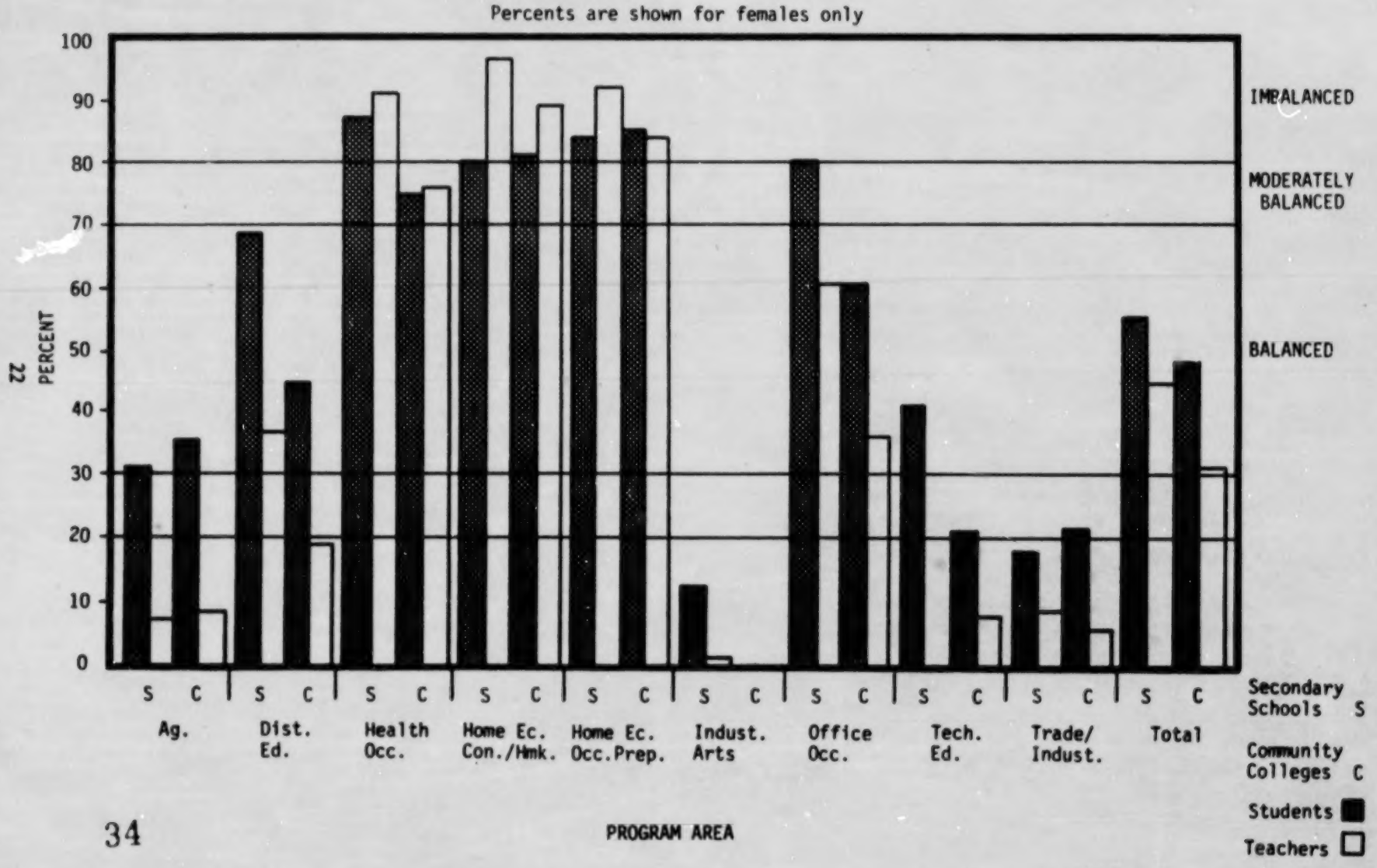


TABLE 9
VOCATIONAL EDUCATION PERSONNEL IN SPECIAL PROGRAMS/SERVICES IN 1977-78
BY SEX AND ETHNICITY PERCENTAGES
FOR SECONDARY SCHOOLS AND COMMUNITY COLLEGES

Level	Ethnicity*	Vocational Education Director or Coordinator			Vocational Guidance Counselors			Vocational Subject Area Supervisors			Other Vocational Personnel			Cooperative Vocational Education			Disadvantaged Programs/ Services			Limited English-Speaking Programs/ Services			Handicapped Programs/ Services			Vocational Work Experience			Other Special Programs			TOTAL		
		% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total	% Total		Ethnic Total
		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F	
Secondary Schools	W	87	13	94	68	32	81	57	43	94	32	68	77	60	40	84	38	62	85	39	61	58	46	54	87	75	25	90	69	31	93	56	44	85
	H	85	15	4	79	21	5	67	33	2	43	57	11	0	100	1	20	80	7	42	58	30	19	81	5	55	45	4	73	27	4	48	52	7
	B	91	9	2	32	68	10	33	67	3	50	50	9	25	75	10	34	66	5	17	83	5	22	78	5	64	36	2	38	62	2	41	59	6
	F	0	0	0	75	25	0	0	0	0	33	67	1	0	0	0	75	25	1	0	100	1	100	0	0	0	0	0	0	0	0	92	8	0
	A/PI	0	0	0	71	29	3	67	33	1	39	61	2	75	25	5	62	38	2	43	57	6	42	58	3	69	31	3	40	60	1	54	46	2
	AI/AN	50	50	0	80	20	1	0	0	0	50	50	0	0	0	0	33	67	0	0	0	0	0	0	0	100	0	1	0	0	0	67	33	0
	TOTAL	87	13	100	65	35	100	57	43	100	35	65	100	56	44	100	37	63	100	39	61	100	44	56	100	74	26	100	68	32	100	54	46	100
Community Colleges	W	86	14	90	67	33	77	71	29	95	33	67	81	69	31	87	33	67	54	80	20	61	36	64	90	76	24	89	21	79	72	50	50	82
	H	100	0	4	73	27	11	92	8	2	44	56	11	75	25	6	46	54	20	55	45	36	37	63	4	59	41	6	33	67	10	52	48	10
	B	100	0	3	45	55	9	57	43	2	43	57	6	83	17	4	38	62	20	0	100	1	27	73	3	40	60	3	22	78	15	43	57	6
	F	0	100	1	100	0	0	100	0	0	29	71	0	0	100	0	9	91	2	0	0	0	0	0	0	0	0	0	33	67	1	27	73	0
	A/PI	100	0	1	54	46	3	71	29	1	31	69	2	23	77	3	39	61	3	67	33	2	25	75	3	100	0	1	25	75	2	37	63	2
	AI/AN	0	100	1	100	0	0	50	50	0	30	70	0	0	0	0	67	33	1	0	0	0	50	50	0	100	0	1	100	0	0	50	50	0
	TOTAL	85	15	100	65	35	100	72	28	100	35	65	100	68	32	100	36	64	100	41	59	100	35	65	100	74	26	100	23	77	100	49	51	100

* W = White
H = Hispanic
B = Black
F = Filipino
A/PI = Asian/Pacific Islander
AI/AN = American Indian/Alaskan Natives

Cooperative vocational education statistics on sex and ethnic representation of personnel differed widely depending on ethnicity and level.

A greater proportion of all ethnic minorities were employed in disadvantaged programs at the community college level than at the secondary school level. Overall statistics on women did not appreciably differ between the two levels, but wide differences in sex equity per ethnic classification were apparent.

Limited English Speaking (LES) programs/services personnel had a predictably large hispanic and Asian/Pacific Islander representation. Sex equity distributions for hispanics and Asians/Pacific Islanders in LES services were in balance at both levels, while whites were in balance at the secondary level only.

Personnel in handicapped and vocational work experience programs/services showed similar distributions at secondary school and community college levels and a pattern similar to their distributions among regular teaching personnel (Table 8 on page 18).

Sex equity balance of personnel (see Graph 6 on page 25) was evident at both educational levels in all special programs except work experience: work experience was in moderate balance. Sex equity imbalance of personnel at the director/coordinator position was also evident. Moderate balance to balance was evidence in the other personnel classifications (counselors, subject area supervisors, others).

Ethnic classification distribution in special programs/services (see Graph 7, page 26) was more widespread than was ethnic classification distribution among teaching personnel (Graph 4, page 21). Overall, percentages of special programs/services personnel per ethnic classification were closer to the general ethnic distribution of the State's population. The ethnic distribution pattern, however, still displayed an ethnic pattern dissimilarity (primarily caused by low employment of hispanic individuals).

Conclusions

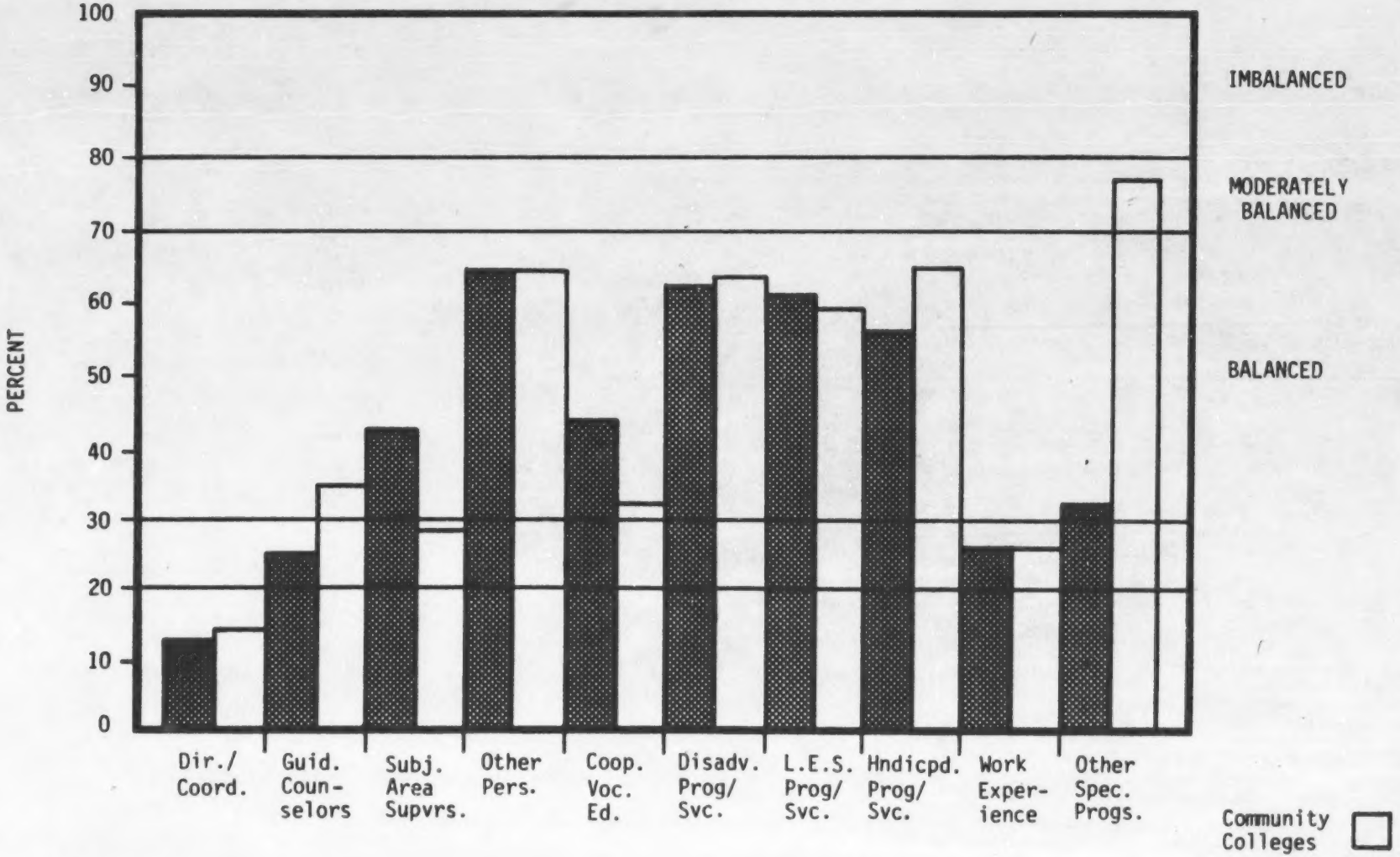
Generalizations may be developed from the analyses of Form VEA 47 employment data by sex, ethnic classification, program area, and type personnel.

1. There was less sex equity evident in personnel employment data than in student enrollment data in 1977-78. Attainment of sex equity for teaching personnel trailed sex equity attainment for personnel in special programs/services. There was a considerable number of cases of sex equity in specialized services/programs.

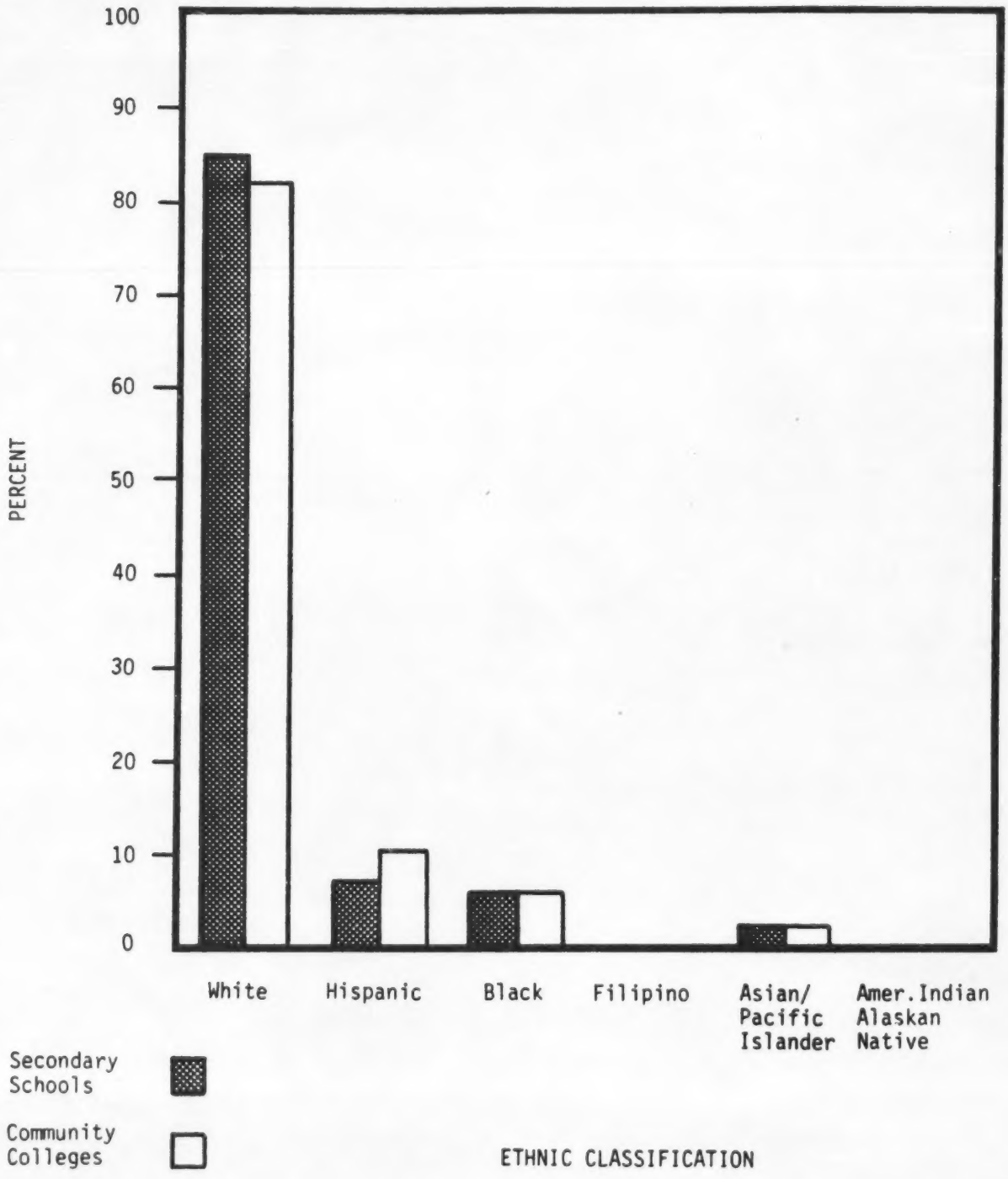
   Sex equity differences among programs was also evident: a few programs showed good sex balance in teaching personnel, but many indicated that considerable imbalance existed in 1977-78.
2. Statistics indicated ethnic representation in personnel employed was more widespread in distribution for special programs/services personnel than for teaching personnel in 1977-78. Neither distributions, however, fully represented the distribution of the general ethnic minority population in the State, and both indicated pattern dissimilarity. Ethnic distributions were generally the same in each of the nine major program areas in 1977-78, except for a considerably lower representation of blacks in the area of agriculture.
3. Variances between secondary school and community college levels were evident and to be expected. Accordingly, each level must deal with its own problems, strengths, and demographics.
4. The two sexes and different ethnic groups have encountered differing employment possibilities and patterns and have differing difficulties in overcoming inequities which exist. Vocational education's hiring and promotional responses to differing ethnic groups, the sexes, and various employment positions must meet these differences to aid and support each individual's employment capability and still meet the hiring organization's legitimate needs.

GRAPH 6
PERSONNEL IN SPECIAL PROGRAMS/SERVICES BY SEX FOR SECONDARY SCHOOLS AND COMMUNITY COLLEGES, 1977-78

Percents are shown for females only



GRAPH 7
ETHNIC CLASSIFICATION OF PERSONNEL IN SPECIAL PROGRAMS/SERVICES FOR SECONDARY SCHOOLS AND COMMUNITY COLLEGES IN VOCATIONAL EDUCATION, 1977-78



ADDITIONAL INFORMATION GATHERING: ON-SITE AND TELEPHONE INTERVIEWS

Introduction

Four trained interviewers audited primary VEA records and interviewed Vocational Education administrators and/or others in the field. They gathered missing data and collected additional information on policies and practices, program strengths and weaknesses, and recommendations for improvement/change.

One hundred thirty interviews were conducted from January through March 1980. Two-thirds of the interviews were held on-site. The final one-third were conducted by telephone after "pilot" telephone interviews had proved as successful in information gathering as on-site interviews.

The results of the additional data collection are found both in this section and the recommendations section of this report. The VEA 47 and 48 audit results are in a following section of this report.

Interview Results

Project staff developed an instrument to determine what kinds of problems and successes the districts were having in collecting or completing data on VEA 47 and VEA 48 forms for the purpose of improving data collection using these forms. The instrument/protocol was reviewed and amended by the project's advisory committee.

The major areas examined in the interview were: (1) continuity of the person(s) responsible for the completion of these forms; (2) clarity of instructions; (3) methods of collection at the district (local) level; (4) usefulness of data at the district (local) level.

A synthesis of the comments from the 130 interviews was developed and is reported below.

Persons responsible for completion of forms. The titles of the individuals responsible for completing the VEA 47 and 48 forms and the percentage distributions of those titles were as follows:

COMMUNITY COLLEGE LEVEL

Dean (Vocational, Occupational, Instructional)	60%
Assistant Dean (Vocational, Occupational, Instructional)	23%
Director Student Services	3%
Registrar	3%
Vocational Education Secretary	3%
Others (less than 1 percent each)	8%

SECONDARY SCHOOL LEVEL

Director/Coordinator of Vocational, Career of Occupational Education	52%
Assistant Principal	10%
Principal	9%
Clerk, Secretary, Typist	5%
Assistant Superintendent	4%
Counselor, Vocational Counselor	4%
Director, Special Projects	4%
Vocational Education Teacher	3%
Superintendent	2%
Coordinator, Regional Occupational Programs	2%
Others (less than 1 percent each)	5%

The majority of individuals responsible for completion of the VEA 47 and 48 forms were at an administrative level (community colleges, 89 percent; secondary schools, 85 percent). The remainder were generally either secretarial staff or other classified personnel, and at the secondary school level a very small percentage were teachers and counselors.

Continuity of personnel. In 76 percent of the cases, there was one person who had been responsible for the VEA 47 and 48 forms for at least two years. Approximately 24 percent of the districts had either lost the primary person responsible for completion of these forms or had one department, but different staff members, responsible for completing forms each year. In over half of these cases there were staff members (clerks, secretaries, assistants) who could step in and, with the assistance of the Vocational Education Regional Office, complete the forms. The districts which had depended solely on one individual for completing the forms were at a great loss when that person was either promoted or lost through cutbacks. New replacements had difficulties and often did not know about Regional Office services.

Continuity of Information on Form Completion. In approximately 82 percent of the sites visited, it was stated that the state Vocational Education Regional Offices had explained the VEA 47 and 48 forms to them and were available (through workshops and by telephone) to answer questions. Eighteen percent of the respondents learned how to fill out the forms on their own or by asking other local staff members for assistance.

Approximately 58 percent of those interviewed felt that the Regional Offices were doing, at the very least, an adequate job. Several in this group were totally satisfied with the services provided. Seventeen percent were dissatisfied with their Regional Office. Reasons cited for dissatisfaction were: slow responses (possibly due to understaffing), incorrect responses, or varied responses to a single question.

Clarity of Form Instructions Provided. Thirty-eight percent indicated that instructions were clear. Thirty-two percent stated instructions were fairly clear, using qualifiers such as "basically clear except for. . . ." The "except for" problem areas were a) unduplicated and duplicated head count; b) completer and leaver categories; and c) variance between written (VEA instruction booklet) and verbal (regional workshops) instructions.

Twenty-five percent asserted that the instructions were unclear. Reasons given were the same as above (head count, completer/leaver, variance in instructions), problems in determining full-time equivalents (each district used its own formulas), and collecting ethnic data (State and Federal categories can differ). Five percent did not respond to the question.

Determining Student Count per Program Area. A number of methods were used to determine which program a student would be counted in. The most often-used methods were: (1) student's declaration of major; (2) student's career goal; (3) student's dominant area of study; (4) county office determination; or (5) if advanced coursework were taken in one area, it was considered the major area of study even if a different area was the declared major.

Time to Complete Forms and System for Data Collection. Respondents were asked to estimate the number of hours it took them to complete the VEA 47 and 48 forms from data collection to completion of the form. The largest number (62 percent) took 100 or less hours to complete this process. Fourteen percent were unable to estimate the time involved, 14 percent took between 100-200 hours, and 10 percent required 201 or more hours to complete the data collection and reports.

There was a significant difference between the data collection systems for secondary school and the community college district offices. In secondary school district offices, the principal requested the student data from teachers or subject area coordinators who reviewed roll sheets or individual student cards for pertinent information and arrived at student totals for the VEA 48's.

VEA 47's were filled out by the principal at each school. Totals were then sent to the district office for compilation. Compilation was still done manually in many districts; others used computers for tabulation.

Community colleges often used their operations reports for completing the VEA 47's. The VEA 48 data was collected each semester when students registered for classes and was tallied by the college's data processing department. This data became part of the S.A.M. system (Student Accountability Model) in those district which had already implemented the S.A.M. system. In multiple-college (campus) districts, results were sent to the district office for compilation.

Include or Exclude Information on Forms. Seventy-seven percent of the respondents indicated that there was no additional information needed on the VEA 47 and 48 forms. The remaining 23 percent wanted the addition of a duplicated count in Section I (C-F) on the VEA 48's. Several districts indicated an interest in having the State send narrative summaries of the VEA data collected back to the district.

Thirty-nine percent of those responding indicated no change necessary on the VEA 47 and 48 forms (do not exclude any data). Sixty-one percent wanted to see specific changes made. The primary areas of concern included ethnic classification, completers and leavers, and unduplicated count.

Many districts were uncomfortable with the subjective method used to determine a student's ethnicity when the information was not volunteered by the student. In many districts the category "other" was used as a receptacle for any student who had not given his/her ethnicity. Teachers would try to determine ethnicity as accurately as possible from physical appearance, name, and language(s) spoken.

The completer and leaver category was seen as an inaccurate measure which did not count all students who exit with marketable skills. Respondents wanted the requirement for reporting only unduplicated counts eliminated. To give a more accurate student profile, most districts wanted to have both counts (duplicated and unduplicated) shown on the VEA 48 form.

Use of Information on Forms. The majority of persons (58 percent) interviewed indicated their district did not use VEA 47 and 48 data once sent to the Regional Office. Forty-two percent of the districts utilized the VEA data for program development, management, and revision, as well as for advisory and board meetings. The data were also used to check affirmative action plans for instructors and to determine ethnic balance in classes. All respondents understood the State's purpose for collecting VEA 47 and VEA 48 data.

Form VEA 45. VEA 45 data were not used by respondents interviewed in 62 percent of the districts. Thirty-eight percent of those interviewed stated VEA 45 data had a useful role in their district. Districts used this data to show the success of course offerings, to determine necessary curriculum changes, and to recruit new students (results of placement success were published in local newspapers).

Fifty-three percent of the secondary school districts interviewed were unaware of the FUSE (Follow-Up of Students and Employers) model which replaces the VEA 45 form. Implementation is expected to begin in the 1981-82 academic year. In those districts which were aware of FUSE (47 percent), awareness ranged from vaguely familiar with to very knowledgeable about the FUSE model. Those districts which will be involved in the first phases of FUSE were the most informed districts.

Most community college districts understood that S.A.M. (Student Accountability Model) would replace or had replaced the VEA 45 collection process. Fifty percent considered S.A.M. to be more effective than the VEA 45 form. These districts indicated S.A.M. identified students more easily and economically and served a broader range of needs than the VEA 45 form did. Thirty-seven percent of the community college districts were unable to comment on the effectiveness/ineffectiveness of the S.A.M. model. These districts had either not yet implemented the S.A.M. system, or were utilizing it on too limited a basis. The remaining 12 percent stated the S.A.M. model was less effective and had a much lower return rate than the VEA 45 form did.

Classification of Personnel. The major portion of the respondents, 72 percent, indicated that there were no problems in classifying teachers and other personnel (VEA 47, Section II).

In 28 percent of the districts interviewed, the category "classifications of personnel" was a problem caused by instructors involved in more than one vocational education discipline. A person who wore several hats was difficult to count correctly.

Other Personnel or Special Program Classifications on VEA 47. Slightly more than half of those interviewed, 58 percent, indicated they did not utilize the "Other Vocational Personnel" category in VEA 47, Section II, (lines 7 and 8). The remaining 42 percent utilized the "Other Vocational Personnel" category for reporting various personnel. The following had been placed in this category: instructional or career education aide, peer counselor, tutor, remedial instructor, director/dean of Vocational Education, secretarial or clerical staff, principal/vice principal, work study coordinator, and agricultural or science technician. Many of the above were erroneously placed in this category.

Sixty-five percent of the districts interviewed did not utilize the "Other Special Programs" category on the VEA 47 form (lines 19 and 20). Thirty-five percent of the districts used this category. Generally, responses placed in this category were appropriate. The programs listed within this category were: home economics placement; general and exploratory work experience; workshops and special sessions; Vocational Education promotion program; women's re-entry; CETA; vocational counseling; F.A.S.T. program (Far Applied Skills Training); tutorial program; cooperative education; day care; recreation; mobile classroom units; and disadvantaged, limited-English-speaking, and handicapped programs.

Support Services for Women. The majority of secondary school districts interviewed, 87 percent, indicated their districts were not offering support services for their women students under Subpart 2 of PL 94-482 (VEA 48, Section II-K). These districts did, however, offer general services which encompassed the needs of women students or had specific services for women not funded by VEA funds. The remaining 13 percent at the secondary level indicated that their districts were offering a variety of support services for women students: Career Awareness Project Co-Education, male/female non-traditional placement services, allocation of funds to produce sex-fair brochures and advertising, and reference materials for women's/non-traditional career center.

Twenty-eight percent of the community colleges interviewed offered no support services for female students under Subpart 2 of PL 94-482 (VEA 48, Section II-K). The remaining seventy-two percent of community college districts did offer a range of Subpart 2 services for women, but did not necessarily indicate such in the "Support Services" category (Section II-K) on the VEA 48 form. Women's services offered included: women's re-entry program/center/coordination, peer counseling services, displaced homemaker services, career awareness for non-traditional jobs, gender equity coordination (workshops for students and personnel), development of sex-fair catalogues/brochures, and child care services.

The following support services were supported with Vocational Education funds, (not necessarily Subpart 2 funds): Project Co-education (subpart 2 funds); V.E.E.P., Vocational Education Equity Project (Subpart 3 funds); sex equity inservice workshops (Subpart 3 funds); audio-visual program (encouraging entry of women into "non-traditional" occupations); career center (Subpart 3 Funds allocated to develop the library and acquire films and film strips); sex equity coordinator; developmental skills instructor; support services for pregnant students (Subpart 5 funds); LES student services (Subpart 2 funds); and New Horizon Project to serve people with special needs (Subpart 2 funds).

Problems in Support Services for Non-Traditional Students. Forty-three percent of the districts interviewed indicated they offered good support services and perceived no problems in their implementation. The remaining 57 percent stated their districts had difficulties implementing support services for their non-traditional students. The two major problem areas were: (1) limited finances

and (2) traditional standards. Several districts had difficulty in raising matching funds for support services. In smaller districts it was difficult to justify spending money on programs not geared to the total student population. Lack of funding also prevented instructors/guidance personnel from being hired or re-assigned to non-traditional teaching/counseling areas. Traditional attitudes were the greatest source of problems for the implementation of good support services for non-traditional students. These traditional attitudes plagued the student at home (parental mindset), in school (peer pressure, student's own conservatism, conservative faculty), and in the community (ethnic traditions for or against various types of work, as well as sex-role definitions).

Placement of Non-Traditional Students. Seventy-two percent of the districts interviewed indicated they had no knowledge of the percent placement for their non-traditional students. Of the remaining 28 percent, 24 percent estimated a 70-80 percent placement, 22 percent estimated a 20-50 percent placement, and 54 percent indicated a very low 1-19 percent placement.

Balanced Employment Practices Problems. Thirty-four percent of the districts interviewed said there were no problems in affecting balanced employment practices. Sixty-six percent of the districts cited the following major problems in implementing more balanced employment: (1) declining enrollments and fiscal allocations (which imply a decline in hiring as well); (2) difficulties in attracting qualified applicants (e.g., lack of social or cultural life for minorities, rural locales, lack of job for spouse of applicant, small districts/lower pay scale; (3) problems in finding applicants qualified in non-traditional fields (e.g., males in home economics or nursing, females in industrial arts or trade and industry; and problems with Vocational Education instructors leaving the teaching profession to enter private industry); and (4) a tenure system encouraging a lack of turnover in the educational job market ("traditionals" remain in their traditional positions).

Affirmative Action. The majority of school districts interviewed, 70 percent, indicated their district, at present, had no affirmative action plan for assessing student balances in a particular program area. This 70 percent included districts which had no plan, but were in the process of completing a plan for future use, as well as districts with no plans for a plan. Thirty percent of the districts stated they had a formal affirmative action plan for assessing student balance in program areas. Affirmative action planning for teachers was in effect in the majority (70 percent) of districts interviewed. The remaining 30 percent of districts interviewed indicated no formal affirmative action policy for teachers had been established within their districts.

THE VEA 47 AND VEA 48 AUDITS

Introduction

District copies of completed VEA 47 and VEA 48 forms from the fiscal year 1977-78 were collected concurrently with the on-site and telephone interviews of randomly selected district sites described in the previous section. Ninety-five of these interviews were secondary school sites; the remaining 35 were at community college sites.

The audit sites were randomly selected from the 130 interview sites. The project staff, with project advisory committee concurrence, determined that a 10 percent sampling of the total number of districts with vocational education programs (70 community college and 378 secondary school districts) was an adequate population sample; therefore, a total of 47 audits were conducted. Eight audits were of community college site data, and 39 audits were of secondary school site data.

The 47 audit sites were divided into VEA 47 and VEA 48 check sites (a 5 percent sample of each form). The VEA 47 forms were checked for 24 community college and secondary school district offices, and the VEA 48 forms were checked for 23 community college and secondary school district offices.

The audit was accomplished by counting, for each form collected, the number of discrepancies which occurred between the data on the particular VEA form (47 or 48) submitted to the state by the district and the data on the state tape and printout from that particular VEA form (47 or 48) for that year (1977-78). The number of discrepancies was divided by the number of data bits on the form to produce a percent discrepancy occurring (a form of percent in error).

Audit Results - VEA 47

The VEA 47 forms are used by the districts for reporting the number of teaching personnel, teachers in special programs/services, and other personnel by sex, ethnicity, and specialized function.

The results of the audits done for the VEA 47 are as follows.

1. For the entire VEA 47 audit sample, a mean of 2.3 percent of the data submitted on the district forms differed from data on the VEA computer tape/printout (a standard deviation of 5.6).
2. Twenty-seven point two (27.2) percent of the districts audited had discrepancies between data submitted on district forms and data on the State's computer tape/printout.
3. For the particular community college and secondary school districts which had discrepancies, a mean of 8.4 percent of the data submitted on district forms differed from the State's computer tape/printout (a standard deviation of 8.3).

Audit Results - VEA 48

On the VEA 48 forms, Sections I and II are used by districts to report the student enrollments by sex, ethnicity, specialized program characteristics, and terminations in instructional programs.

The results of the audits done for the VEA 48 are as follows.

1. For the entire VEA 48 audit sample, a mean of 2.0 percent of the data submitted on the district forms differed from data on the State's computer tape/printout (a standard deviation of 5.2).
2. Thirty-six point eight (36.8) percent of the districts audited had discrepancies between data submitted on district forms and data on the State's computer tape/printout.
3. For the particular community college and secondary school districts which had discrepancies, a mean of 5.5 percent of the data submitted on district forms differed from data on the State's computer tape/printout (a standard deviation of 7.6).

RECOMMENDATIONS FOR THE COLLECTION OF THE VEA 47/48 DATA*

Problem I. There is a multiplicity of forms, including the VEA 47 and 48's, used to collect the same or similar data (information) at the State and Federal level.

It is costly, time consuming, and confusing at the local and district level to respond to multiple requests for data, especially when agencies requesting reports ask for a variation of the same information.

Recommentation: A serious effort needs to be made at the State level to end such duplication and thereby eliminate the confusion and communication difficulties produced by increasing amounts and duplication of data collected.

Strategy: The State Department of Education and the Chancellor's Office of the California Community Colleges need to work closely together with responsible Federal vocational education officials to simplify and determine minimal information requirements and details which can satisfy reporting requirements for the State and Federal levels.

The most detailed information collected should be at and for the district level. This is the data actually used by the district for developing/evaluating programs and curriculum.

The data at the district level needs to be detailed enough to satisfy State aggregation requirements and for State aggregation to satisfy the Federal collection needs/requirements.

The data would be most detailed at the district level and most aggregated at the Federal level.

One set of forms and one format can then be developed and used to collect all necessary information for all levels of government.

Problem II. The reformatting of the VEA 47 and VEA 48 forms are a major problem for secondary school and community college district staffs who have collected data far in advance of the due date or who have computerized systems which will need to be reprogrammed to accommodate changes which occur.

Recommendation: Since it is inevitable that the data collection forms will change when the State or Federal government needs a new set of information, it is important that the reformatting of VEA 47 and 48 forms be done in a timely fashion to provide ample lead time for districts to modify their data systems and collect the new data most efficiently.

Strategy: The State needs to extend to districts the amount of time required for the district's data systems to be revised. Time allowed should be in addition to the usual time allotted for the completion of the reports (three to six months should be adequate). The State should establish firm deadlines by which the State must have all changes in VEA 47 and 48 forms completed to allow districts to meet State required data submission dates.

Problem III. The secondary school and community college regional VEA 47 and 48 workshops for instructing district staff in the correct method of completing these forms are often held at inappropriate times of the year to be of maximal use to school districts. If a workshop is held too far in advance of submission of form deadline, the forms which are discussed in the workshop may still undergo changes (see Problem II) because of new State or Federal government mandates.

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*Activites encompassing a number of these recommendations have already been implemented by vocational education personnel.

Recommendation: The secondary school and community college Regional Offices need to carefully coordinate their VEA 47 and 48 training session efforts with the districts they serve, attempting to provide workshops at *the most appropriate date(s) prior to the* VEA 47 and 48 due date.

Strategy: Workshops for instruction in completing VEA 47 and 48's should occur just after the current year's VEA forms are released.

These workshops should be given closely enough to the due date to be meaningful, but far enough in advance to allow lead time to make necessary changes in the data system.

Problem IV. There are approximately 34 State regional representatives presenting their own interpretations of the VEA information to the various secondary school and community college districts. This causes variance in the ways the forms are completed and the information provided.

Recommendation: The training given at the Regional Workshops for completing the VEA 47 and 48 forms should be standardized.

Strategy: Standardization could be accomplished by a slide/tape show presenting the instructions in a step-by-step format. A companion booklet or set of handouts containing examples and basic information covered in the workshop should be given to each participant. This presentation would be designed by regional representatives and would include illustrations of the forms and definitions of the terms found on the VEA 47 and 48 forms.

Problem V. The secondary school and community college districts are presently having to wait 1-2 years for feedback on data collected on the VEA 47 and 48 forms. Prompt feedback would be useful for program development and evaluation.

Recommendation: A six-month "turn around" time, from the time the State receives the data from the district to the publication of State/district totals and analysis of districts as compared to the State average, would be appropriate.

Strategy: Establish a firm deadline by which the State returns the results of the VEA 47 and 48 reports that were submitted to districts for district use. Timely reporting may require tightened data processing deadlines and/or accountability controls on data processing personnel/computer facility use and/or more direct control over processing.

Problem VI. Many secondary school and community college districts indicate that the unduplicated head count on the VEA 48 misrepresents actual student enrollments per area of major study, particularly for those students who have double majors or are undeclared in a major area of study.

Recommendation: Use a duplicated head count for section 1 C-F, on the VEA 48 forms and utilize the "unduplicating factor" to provide good estimations for any unduplicated count required.

Strategy: The VEA 48 form could be revised to collect a duplicated head count and to satisfy the VEDS system. A state-developed "unduplicating factor" (divide by 1.25) could be applied to the duplicated counts to get any required unduplicated counts.

Problem VII. There presently exists a multiplicity of coding systems (United States Office of Education Codes, Taxonomy of Program, Dictionary of Occupational Titles, Classification of Instructional Disciplines) which are not congruent. Therefore, a program code in one system cannot necessarily be accurately translated into a code in another system. The code classification systems are not clear enough to allow for definitive program coding. For example, within a coding system (example USOE codes) a program at one school may use one code whereas the same program (with perhaps a slightly different title) may use another code and thereby seem to be a different program.

Recommendation: A single standardized coding system should be used on a state-wide basis.

Strategy: Establish a panel, including vocational education teachers, administrators, and staff, as well as State and Federal specialists, to determine one coding system to use on all forms. This system may be one of the present systems of codes or a new system pulling the best elements of existing systems together. This system would be used consistently throughout the State and would satisfy Federal reporting mandates. Vocational education personnel would require inservice training in proper use and monitoring of the system.

RECOMMENDATIONS FOR INCREASING WOMEN AND MINORITIES IN PROGRAMS/EMPLOYMENT*

Problem I. Social and cultural stereotypes and biases (e.g., conservatism, gender and sex role stereotyping, peer pressure and religious and cultural traditions) can hinder the entry of women and minorities into particular jobs and programs.

Recommendation: To overcome social and cultural stereotypes and biases, the general public needs to be educated to the present status of women and minorities (policies and tendencies occurring presently) and to the value of women and ethnic and non-traditional students/employees.

Strategy: The State Department of Education and the Chancellor's Office of the California Community Colleges should conduct a mass media campaign to communicate not only the factual demographics of women/minorities in programs/employment, but also abilities, qualifications, and most importantly the success rates of women, ethnic, and other non-traditional students/employees in programs/employment.

Such a campaign would enlist the support of schools/colleges, churches, clubs, and organizations in an effort to overcome these stereotypes/biases.

The Public Awareness Project, an exemplary PL94-142 Special Studies Project in Special Education currently in progress, is an example of such a model campaign which utilizes numerous innovative communication techniques.

Problem II. Many students and prospective employees have low self-esteem, an inability to see themselves as capable of performing many different roles, and fears of entering into a particular job or program due to real or imagined basic skill deficiencies.

Recommendation: Give students and employees training in basic skills, job-seeking skills, and specific job competencies, and provide them with the necessary support services to enable them to complete their training and be successfully placed.

Strategy: 1. Basic educational skills such as math, language (oral and written), and in many instances science, job seeking skills (e.g., interviewing, job application, grooming), as well as job competencies (actual skills needed on the job), should be required at the local level and by the State Department of Education and the Chancellor's Office of the California Community Colleges at an educational level which would (a) increase employment opportunities at job-entry level, and (b) support the student and perspective employee's positive self-concept and confidence in using these basic skills and competencies to accomplish tasks on the job.

2. Instructional and counseling support services play an integral part in augmenting the learning of basic skills, and these services—along with child care, financial aid, and re-entry programs—help in keeping the student and employee involved and employable in a career area. A specialized tutorial program to enable the student and employee to gain equal access to vocational programs to learn necessary job skills is helpful. Support services should function as a recruitment agency as well as a placement service. Support services for non-traditional students include career counseling, career days, career seminars and career centers. Support services must involve employers, community, family, and friends if they are to successfully reinforce the career decisions made by non-traditional students and employees.

3. Staff development for classroom instructors and guidance personnel should focus on sex

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*The term "minorities," for the purpose of this project, includes any student or employee entering a program or career in which people with his/her particular disability or of his/her particular sex or ethnicity have not traditionally participated.

Activities encompassing these recommendations are in the process of being implemented.

and racial equity and specific strategies for enhancing student awareness and their desire to develop and use their own multiplicity of skills.

Problem III. Specific geographic areas are able to sustain only a limited number of potential and actual employees.

Recommendation: The schools/colleges should carefully research the employment possibilities in their area to determine the needs of the current and projected local job market, as well as state-wide needs, prior to initiating new programs or perpetuating on-going programs.

Strategy: 1. Utilize community resources (leaders, businesses, manpower, E.D.D.) to determine the area's present and probable/potential job market(s).

2. Focus new programs on the community's vocational needs based upon local job analysis such as (1) above, as well as state-wide vocational needs.

3. Career counseling should realistically advise students of the career potential of their geographical area. This would allow a student to choose a vocational goal that would fit the locale or examine relocation possibilities where the vocational goal is more attainable.

APPENDIX: LIST OF DISTRICTS INTERVIEWED

The following is a list of the one hundred-thirty districts interviewed by on-site visitation or telephone. A copy of the interview instrument can be obtained from Ira Nelken & Associates, Inc., Chico, CA.

SECONDARY SCHOOL DISTRICTS

1. Chico Unified School District, Chico, CA
2. Gridley Union High School District, Gridley, CA
3. Black Oak Unified School District, Georgetown, CA
4. Eureka City Schools, Eureka, CA
5. Kelseyville Unified School District, Kelseyville, CA
6. Konocti Unified School District, Clearlake Highlands, CA
7. Big Valley Joint Unified School District, Bieber, CA
8. Lassen Union High School District, Susanville, CA
9. Anderson Valley Unified School District, Boonville, CA
10. Round Valley Unified School District, Covelo, CA
11. Willits Unified School District, Willits, CA
12. Calistoga Joint Unified School District, Calistoga, CA
13. Placer Joint Union School District, Auburn, CA
14. Tahoe-Truckee Unified School District, Truckee, CA
15. Elk Grove Unified School District, Elk Grove, CA
16. Grant Joint Union High School District, Sacramento, CA
17. Anderson Union High School District, Anderson, CA
18. Fall River Joint Unified School District, Fall River Mills, CA
19. Analy Union High School District, Sebastopol, CA
20. Petaluma High School District, Petaluma, CA
21. Healdsburg Union High School District, Healdsburg, CA
22. Santa Rosa City Schools, Santa Rosa, CA
23. East Nicolaus Joint Union High School District, Trowbridge, CA
24. Sutter Union High School District, Sutter, CA
25. Los Molinos Unified School District, Los Molinos, CA
26. Trinity County Joint Union High School District, Weaverville, CA
27. Davis Joint Unified School District, Davis, CA
28. Ione Unified School District, Ione, CA
29. Calaveras Unified School District, San Andreas, CA
30. Fresno City Unified School District, Fresno, CA
31. Kingsburg Joint Union High School District, Kingsburg, CA
32. Riverdale Joint Union High School District, Riverdale, CA
33. Sanger Unified School District, Sanger, CA
34. Shoreline Unified School District, Tomales, CA
35. Carmel Unified School District, Carmel, CA
36. Monterey Peninsula Unified School District, Monterey, CA
37. North Monterey County Unified School District, Castroville, CA
38. Salinas Union High School District, Salinas, CA
39. Lodi Unified School District, Lodi, CA
40. Stockton City Unified School District, Stockton, CA
41. San Lorenzo Valley Unified School District, Felton, CA
42. Denair Unified School District, Denair, CA
43. Patterson Joint Unified School District, Patterson, CA
44. Tulare Union High School District, Tulare, CA
45. Summerville Union High School District, Tuolumne, CA

46. Amador Valley Joint Union High School District, Pleasanton, CA
47. Livermore Valley Joint Unified School District, Livermore, CA
48. New Haven Unified School District, Union City, CA
49. Oakland Unified School District, Oakland, CA
50. Novato Unified School District, Novato, CA
51. Cabrillo Unified School District, Half Moon Bay, CA
52. Campbell Union High School District, San Jose, CA
53. East Side Union High School District, San Jose, CA
54. Milpitas Unified School District, Milpitas, CA
55. Santa Clara Unified School District, Santa Clara, CA
56. Brawley Union High School District, Brawley, CA
57. Mojave Unified School District, Mojave, CA
58. Sierra Sands Union High School District, Ridgecrest, CA
59. Taft Union High School District, Taft, CA
60. ABC Unified School District, Cerritos, CA
61. Antelope Valley Union High School District, Lancaster, CA
62. Arcadia Unified School District, Arcadia, CA
63. Baldwin Park Unified School District, Baldwin Park, CA
64. El Monte Union High School District, El Monte, CA
65. El Rancho Unified School District, Pico Rivera, CA
66. El Segundo Unified School District, El Segundo, CA
67. Glendora Unified School District, Glendora, CA
68. Hacienda-La Puente Unified School District, La Puente, CA
69. Norwalk-La Miranda Unified School District, Norwalk, CA
70. Paramount Unified School District, Paramount, CA
71. Pomona Unified School District, Pomona, CA
72. Anaheim Union High School District, Anaheim, CA
73. Brea-Olinda Unified School District, Brea, CA
74. Capistrano Unified School District, San Juan Capistrano, CA
75. Fullerton Joint Union High School District, Fullerton, CA
76. Orange Unified School District, Orange, CA
77. Placentia Unified School District, Placentia, CA
78. Santa Ana Unified School District, Santa Ana, CA
79. San Jacinto Unified School District, San Jacinto, CA
80. Bear Valley Unified School District, Big Bear Lake, CA
81. Chino Unified School District, Chino, CA
82. Colton Joint Unified School District, Colton, CA
83. Morongo Unified School District, Twenty-nine Palms, CA
84. Rialto Unified School District, Rialto, CA
85. Rim of the World Unified School District, Lake Arrowhead, CA
86. Yucaipa Joint Unified School District, Yucaipa, CA
87. Escondido Union High School District, Escondido, CA
88. Oceanside Unified School District, Oceanside, CA
89. Poway Unified School District, Poway, CA
90. Ramona Unified School District, Ramona, CA
91. San Dieguito Union High School District, Leucadia, CA
92. San Marcos Unified School District, San Marcos, CA
93. Shandon Unified School District, Shandon, CA
94. Santa Maria Joint Union High School District, Santa Maria, CA
95. Santa Ynez Valley Union High School District, Santa Ynez, CA

COMMUNITY COLLEGE DISTRICTS

96. Lassen Community College District, Susanville, CA
97. Mendocino Community College District, Ukiah, CA
98. Siskiyous Joint Community College District, Weed, CA
99. Yuba Community College District, Marysville, CA
100. Los Rios Community College District, Sacramento, CA
101. Cabrillo Community College District, Aptos, CA
102. Hartnell Community College District, Salinas, CA
103. Merced Community College District, Merced, CA
104. San Joaquin Delta Community College District, Stockton, CA
105. Solano County Community College District, Suisun City, CA
106. State Center Community College District, Fresno, CA
107. South County Community College District, Hayward, CA
108. Marin Community College District, Kentfield, CA
109. San Jose City College District, San Jose, CA
110. San Mateo Community College District, San Mateo, CA
111. West Valley Joint Community College District, Saratoga, CA
112. Allan Hancock Joint Community College District, Santa Maria, CA
113. Antelope Valley Community College District, Lancaster, CA
114. Citrus Community College District, Azusa, CA
115. Coachella Valley Joint Community College District, Palm Desert, CA
116. El Camino Community College District, Via Torrance, CA
117. Glendale Community College District, Glendale, CA
118. Grossmont Community College District, El Cajun, CA
119. Imperial Valley Community College District, Imperial, CA
120. Long Beach Community College District, Long Beach, CA
121. Palomar Community College District, San Marcos, CA
122. Pasadena Area Comunity College District, Pasadena, CA
123. Rio Hondo Community College District, Whittier, CA
124. Riverside Community College District, Riverside, CA
125. Saddleback Community College District, Mission Viejo, CA
126. San Bernardino Community College District, San Bernadino, CA
127. Rancho Santiago Community College District, Santa Ana, CA
128. Sweetwater Community College District, Chula Vista, CA
129. Victor Valley Community College District, Victorville, CA
130. Los Angeles Community College District, Los Angeles, CA

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